

APPENDIX TO THE REPORT OF THE MINISTER OF AGRICULTURE

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REPORT

OF THE

DAIRY AND COLD STORAGE COMMISSIONER

FOR THE

FISCAL YEAR ENDING MARCH 31

1911

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Part I.—Dairying.

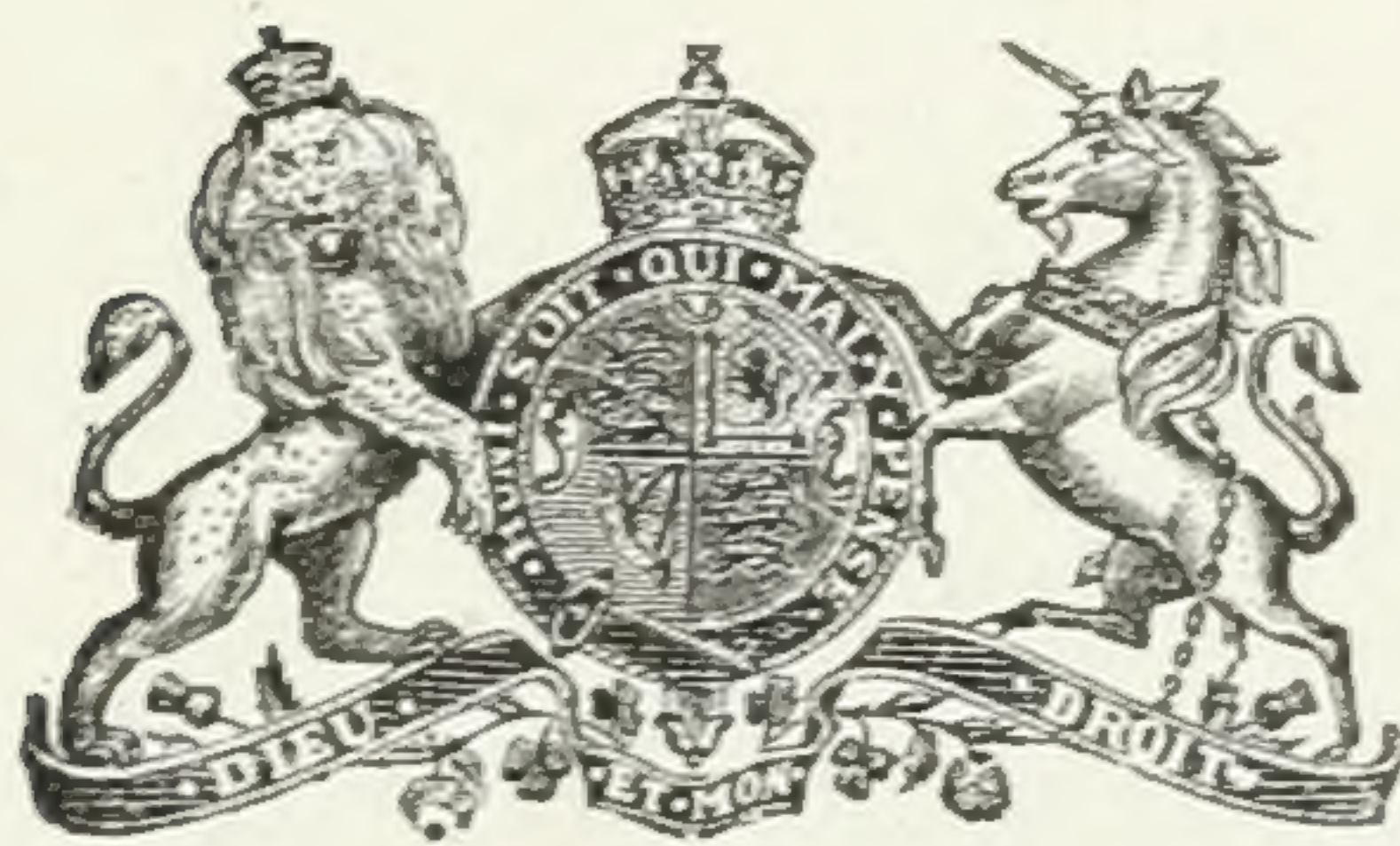
Part II.—Extension of Markets.

Part III.—Fruit.

Part IV.—Cold Storage.

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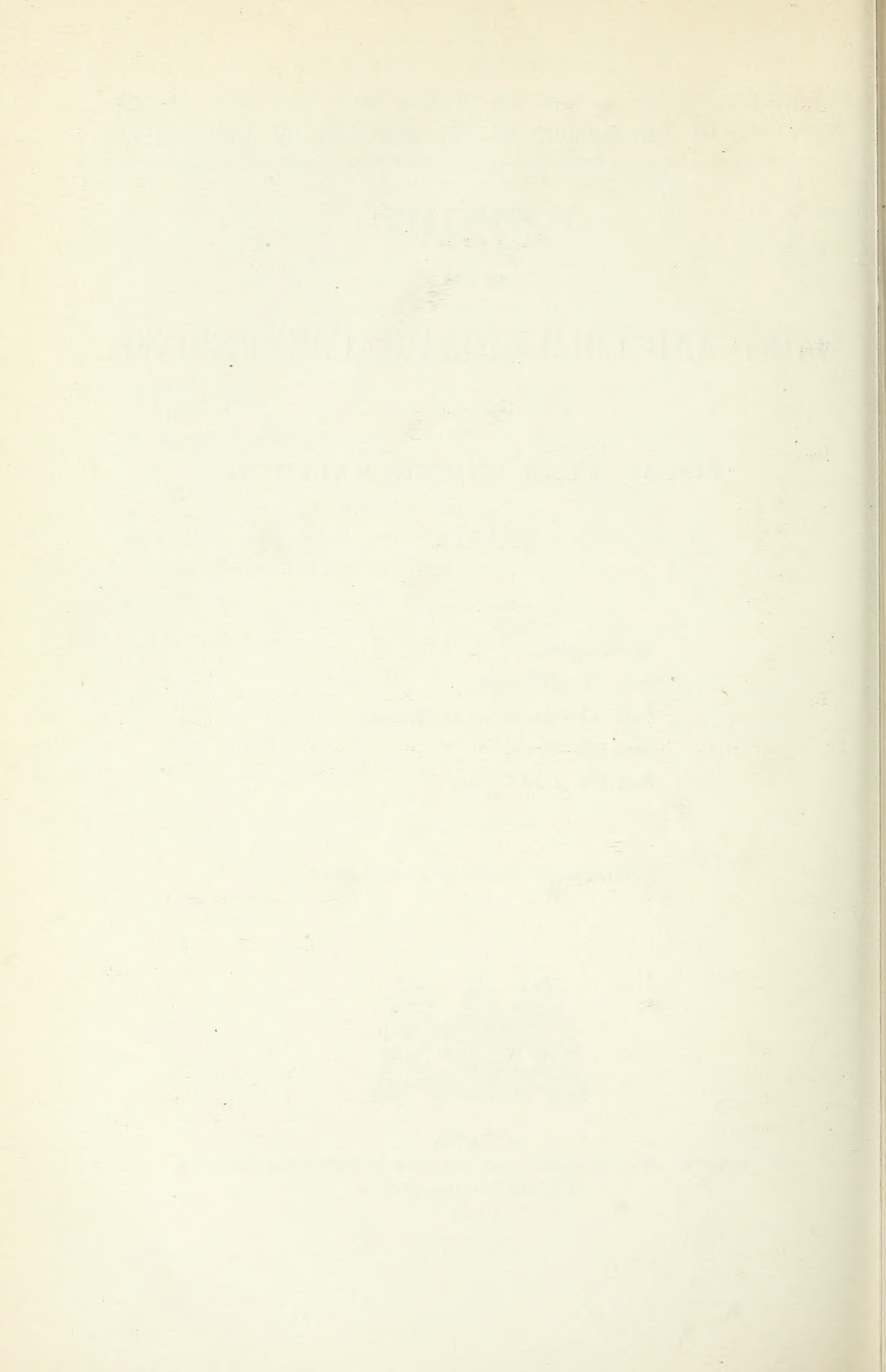
OTTAWA

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1911

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APPENDIX

TO THE

REPORT OF THE MINISTER OF AGRICULTURE

BEING THE

REPORT OF THE DAIRY AND COLD STORAGE  
COMMISSIONER

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OTTAWA, March 31, 1911.

To the Honourable

The Minister of Agriculture.

SIR,—I have the honour to submit my report as Dairy and Cold Storage Commissioner in your department for the year ended March 31, 1911. The detailed report is presented, as usual, under four heads, namely:

Part I. Dairying.

Part II. Extension of Markets.

Part III. Fruit.

Part IV. Cold Storage.

DAIRYING.

I am able to report excellent progress with the cow testing movement. The interest in this subject has increased very much during the year. At first we had to urge farmers to take up the work, but now they come to us for information and the necessary blank forms for keeping records.

The plan which you have authorized for the organization of Dairy Record Centres is receiving hearty support in several districts. Steps have been taken to establish centres in Oxford, Peterboro' and Lanark counties in Ontario, in Brome and St. Hyacinthe in Quebec, and at Kensington in Prince Edward Island.

An investigation was begun during the summer of 1910, with a view of determining the best method of handling cream intended for cream gathering creameries. A most interesting field of inquiry has been opened up and it is proposed to continue, with a view of concluding, the investigation during the summer of 1911.

I am pleased to report that the laws relating to the manufacture and sale of dairy products are well observed, on the whole. The Inspector of Dairy Products found it necessary to prosecute only three traders for selling and two for manufac-



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turing butter containing an excess over the legal limit of water, and two cheese makers for 'stuffing' new cheese with old or worthless curd. A conviction was secured in each case.

There was so little demand for the services of the Official Referee at Montreal during the season of 1909 that there seemed to be no justification for continuing the office, and, in consequence, there was no referee in Montreal during the past season.

A review of the season of 1910 does not show any very marked features. The conditions, on the whole, were rather more favourable for the production of milk than they were during the previous year, and notwithstanding the continued increase in the home consumption of dairy products and a somewhat lower price for cheese, there was an increase in the total value of the exports for the fiscal year ending March 31, 1911, as compared with the preceding twelve months. The export of cream to the United States showed a very large increase, the particulars of which will be found in Part I.

There has been an increased demand for 'casein' which is the trade name for the dried curd of skimmed milk, for which new uses are being discovered every day. The price has risen sufficiently to make casein a profitable by-product of the separator creamery, and it seems probable that this product may become an important source of revenue. As casein can only be produced at a separator creamery, it would seem as though the revenue to be derived from it may be an important factor in preventing separator creameries from adopting the cream gathering plan, or even to encourage cream gathering creameries to adopt the separator plan.

This Branch has for several years operated a demonstration creamery at Scotsburn, N.S. The quantity of butter manufactured was very small at first, but by degrees the patrons have become educated in dairying methods and the output is now growing rapidly. The quantity of butter manufactured was twice as large in 1909 as it was in 1908, and three times as large in 1910 as it was in 1909, the output from April 1 to December 31, 1910, being 107,715 pounds. The patrons, who are also the owners, assumed full charge of the creamery on January 1, 1911, and I am informed by the manager that he expects to double the output again this year. The creamery is now the largest in the maritime provinces.

#### EXTENSION OF MARKETS.

The work in this division has been along the same lines as for several years past, except in so far as experience enables us to improve our methods. The cargo inspection was extended to Prince Edward Island in 1910. An inspector was located at Charlottetown, who followed the fortnightly shipments of cheese to Halifax, via Pictou, and saw them stowed in the ocean steamer. This supervision resulted in certain improvements being made in the handling of the cheese between the factories on the island and the steamer at Halifax.

The usual supervision was exercised over all the iced car services and the export of perishable products.

A systematic attempt was made in September last to test the markets of Great Britain as an outlet for Canadian peaches. Mr. W. W. Moore, Chief of the Extension of Markets Division, personally supervised the packing and transportation of these trial shipments.



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The peaches were landed in Great Britain in excellent condition and sold for good prices, netting the growers about three times as much as they could have obtained in the local markets after all expenses incurred by the department were deducted. These trial shipments have demonstrated conclusively that peaches of certain varieties can be successfully laid down on the Old Country markets. Full particulars of the shipments will be found in Bulletin No. 27 of the Dairy and Cold Storage Series.

A large amount of work has been done through this division in compiling statements showing prices of various farm products, in different markets on this continent, and also in the United Kingdom, for several years past. A few of the tables prepared will be found in Part II. We have increased our facilities for collecting such information during the year, and we propose to give rather more attention to this kind of work in future.

Some tables will be found in Part II.

## FRUIT.

The apple crop of 1910, except in British Columbia, was the smallest for several years, and high prices have prevailed. The crop was characterized by a large percentage of clean, highly coloured, well matured fruit. The orchards that were thoroughly sprayed turned out so well in comparison with others not sprayed, that growers have had a most excellent object lesson on that point. The indications are that much more spraying will be done during the coming season than ever before.

A new fruit inspector was appointed at Prince Rupert during the year.

The total number of packages inspected was nearly as large as in 1909, and on account of the comparatively small crop, a very much larger percentage of the total packages was examined than ever before.

There were 60 convictions for illegal marking and packing of fruit in 1910, as compared with 216 in 1909.

Acting on your instructions, I arranged for the selection and packing of 150 boxes of Fameuse and McIntosh Red apples, which were forwarded to the Brussels Exhibition on October 8, last. They were specially packed to avoid bruising, and I am informed by the Exhibition Commissioner at Brussels that they arrived in perfect condition and were greatly admired by those who had an opportunity of sampling them.

We have also collected over 1,200 boxes of apples for the Festival of Empire Exhibition to be held in London this year. These apples were, as far as possible, packed in the orchard and sent direct to cold storage. They have recently been examined and are still in perfect condition.

The Monthly Fruit Crop Report was issued from May to October, as usual. The publication of this report involves a large amount of routine work and it requires constant attention to keep up an active list of correspondents.

## COLD STORAGE.

The offer of a bonus of \$100 for the erection of cold storages at creameries was continued throughout the year. The bonuses are paid only in those cases where the



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cold storage is constructed according to the plans supplied by this office, or according to others of equal sufficiency. An inspection is made previous to payment of the bonus.

The three iced car services for the carriage of fruit, cheese and butter respectively, were arranged for, as usual, with the railway companies.

The arrangement by which cold storage chambers were reserved on certain steamers for the carriage of fruit only was again carried out, covering eleven steamers sailing from Montreal between September 8 and October 1, to London, Liverpool, Glasgow and Bristol. The quantity of tender fruit exported in 1910 greatly exceeded that of any previous year and the quantity of fruit of all kinds exported in cold storage was very much larger than ever before. Full details of these shipments will be found in Part IV.

The experiments in the cold storage of apples mentioned in last year's report was concluded during the period under review. Some of the apples were sold in Great Britain and two car loads were disposed of at Calgary, Alta.

These experiments or trial shipments have demonstrated the following points:—

1. It is of the greatest importance that apples intended for cold storage should be placed therein as quickly as possible after being harvested.

2. If the apples are carefully packed at the time of harvesting, either in barrels or boxes, they may be exported at any time during the winter without repacking.

3. It was also clearly shown that cold storage will not preserve apples which are bruised or injured in any way, and that the blue moulds, which cause the ordinary brown rot of apples, will develop in cold storage, if there is any injury to the skin which exposes the tissue of the apple, and the Northern Spy apples appear to be particularly susceptible to this form of decay, unless the fruit is well matured and the skin is sound.

A full report of these experiments will be found in Bulletin No. 24 of the Dairy and Cold Storage series.

A preliminary test of cold storage for grapes was undertaken last autumn, which will lead to further inquiry and investigation.

The erection of cold storage warehouses for which subsidies have been asked under the Cold Storage Act, has been more active during the past year than at any time since the Act came into force. Contracts have been entered into during the year for the payment of subsidies on warehouses erected or to be erected at Halifax, N.S., Quebec, Que., Brockville, Ont., Lindsay, Ont., and Harriston, Ont. Applications have been received for subsidies on warehouses which are to be erected at Calgary, Alta., and Brandon, Man.

#### MEETINGS.

A large number of meetings have been attended by members of the staff during the year.

A series of fruit and orchard meetings was organized in Middlesex, Huron and Bruce counties in Ontario, and in Chateauguay and Huntingdon counties in Quebec, and also in Prince Edward Island. These meetings were addressed by the Chief of the Fruit Division and several of the fruit inspectors.



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The Chief of the Dairy Division has been busy during the winter months addressing meetings, by request, on the 'Care of Milk for Cheesemaking' and other dairying topics.

Messrs. J. C. Chapais and J. N. Lemieux, in addition to many other meetings, organized and addressed an important series of 31 dairy meetings in Montmagny, L'Islet, Temiscouata, Kamouraska and Rimouski counties, Quebec, during February and March. No meetings of the kind had ever been held in some of the places visited. It speaks well for the future of dairying in these districts, that notwithstanding some very inclement weather during the period, there was an average attendance of over 200 people. These two officers also attended some special meetings in the western part of Pontiac county, where there is promise of an important dairying district being established.

The officers specially charged with the promotion of the cow testing movement have attended numerous meetings in that connection.

Representatives of this Branch attended, by invitation, practically all the annual conventions of the provincial associations of fruit growers and dairymen.

## PUBLICATIONS.

The publications of this Branch for the year were as follows:—

Bulletin No. 24—'Some Trial Shipments of Cold Storage Apples.'

" " 25—'Coulommier Cheese.'

" " 26—'Dairy Legislation.'

" " 27—'Trial Shipments of Peaches, 1910.'

Circular No. 1—'Ice! Cars for Cheese.'

" " 2—'The Milk Test Act.'

" " 3—'The Outlook for Canadian Tomatoes in Great Britain.'

The Monthly Fruit Crop Report was issued as usual from May to October. (5 numbers.)

## PLANS FOR DAIRY BUILDINGS AND FRUIT COLD STORAGES.

This Branch continues to supply, free of charge, blue prints and specifications for cheese factories and creamery buildings, for creamery cold storages and small cold storages intended for farmer's use. We also have a plan for a fruit cold storage suitable for co-operative associations. A larger number of these plans have been distributed during the year and rather more than usual inquiry has been made for information respecting the construction of cool cheese curing rooms.

## ACKNOWLEDGMENTS.

This branch lost, by resignation, two useful members of its staff during the year in the persons of Mr. M. R. Baker, Senior Fruit Inspector, and A. Beauchesne, French-English stenographer.

I am able once more to record my high appreciation of the services rendered by members of the staff. The general record for punctuality, industry and devotion to duty is excellent.

I am especially indebted to Mr. W. W. Moore, Chief of the Markets Division, Mr. A. McNeill, Chief of the Fruit Division, and Mr. Geo. H. Barr, Chief of the



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Dairy Division, for valuable assistance and loyal support in carrying on the work of the Branch. To these officers, to Mr. J. C. Chapais, Assistant Dairy Commissioner, and to Mr. C. F. Whitley, in charge of Dairy Records, I am indebted for a large share of the work of preparing this report.

Among the outside officers, I have much pleasure in referring to the work of Messrs. J. N. Lemieux and Jos. Burgess. Both these officers have been employed in various capacities throughout the year. They have rendered excellent service as refrigerator car inspectors, in promoting different lines of dairy work and in the collection and packing of apples for exhibition purposes.

The fruit inspectors have been assiduous in their duties and have rendered good services by promoting in many ways the best interests of the fruit industry.

Mr. P. J. Carey has rendered special service as a demonstrator and lecturer on improved methods of apple packing. Mr. Carey also assisted in the packing of the peaches for the special trial shipments.

I have to acknowledge also the kindly co-operation of the Department of Inland Revenue in making analyses in connection with the administration of the Butter Act.

I have the honour to be, sir,

Your obedient servant,

J. A. RUDDICK,

*Dairy and Cold Storage Commissioner.*



## PART I.—DAIRYING







## PART I—DAIRYING.

As a review of the progress and status of the dairying industry in Canada, the following address delivered before the Dairymen's Association of Western Ontario is reproduced with corrections in the tables and other figures to bring the information down to March 31.

### THE OUTLOOK FOR DAIRYING IN CANADA.

By J. A. RUDDICK.

*(A revision of an address delivered before the Dairymen's Association of Western Ontario, at Stratford, Ont., on January 12, 1911).*

I propose to present this subject for your consideration under two heads: (1) the possibilities and probabilities of an increased milk production, and (2) the chances for marketing an increased output at paying prices.

In taking up the first question, it may help us to arrive at a conclusion if we review the situation during the last few years and thus find a basis of calculation for the future.

I need hardly go over the familiar story of the decrease in our exports of butter and cheese from 1904 down to 1908. Great emphasis has been laid on this. I have no doubt you are aware also that this decrease has been accepted by some as an evidence of a decline in the dairy industry; an assumption which is entirely unwarranted, as I hope to prove to you before I finish.

#### EXPORT OF CREAM.

As the shipment of cream to the United States has grown to large proportions and must be reckoned in our export trade, it may be as well to consider this item first. The genesis of this market for a part of our dairy production is well known to most Canadian dairymen, but it may not be out of place to restate it briefly.

Previously to August 5, 1909, the duty on cream entering the United States was 2 cents a pound. In the Payne-Aldrich tariff, which came into force on the date mentioned, the duty is reduced to 5 cents a gallon. As a gallon of rich cream will make over 4 pounds of butter and the duty on butter is 6 cents a pound, the inducement to Americans to import cream is easily understood. Creameries have been erected at many points along the border and large quantities are shipped to the New England cities of Boston, Worcester and other points.

I may say in passing that there has lately been developed in connection with this trade a demand for wet casein, or skimmilk curd, and it would appear that this method of disposing of the skimmilk where cream is shipped may be an additional source of revenue. This applies particularly to cheese factories engaged in the cream trade. The ordinary cheesemaking apparatus can be used for making wet casein and the whey which is left is practically the same as that from cheese manufacture. The manufacture of casein has the additional advantage of keeping the cheese factory establishment in working order.



The first shipments of cream were made in August, 1909, and the record month by month since that date is as follows:—

Months.	1909-10.		1910-11.	
	Gallons.	Value.	Gallons.	Value.
		\$		\$
April .....			16,263	18,488
May. ....			52,430	55,150
June.....			152,070	145,818
July....			238,805	221,559
August.....	1,650	1,640	266,967	265,238
September.....	12,160	12,050	271,463	262,393
October.....	39,099	40,109	327,064	309,919
November.....	70,059	71,020	213,656	196,570
December.....	31,807	37,483	151,903	119,852
January.....	81,447	82,140	68,873	62,583
February.....			47,083	42,034
March.....			17,244	14,894
	236,222	244,442	1,823,821	1,714,528

Owing to the slump in butter prices in the United States shortly after the New Year, the export of cream has almost ceased, for the present, at any rate. The quantity exported during the past 12 months represents about 7,295,284 pounds of butter, or 16,000,000 pounds (200,000 boxes) of cheese. If this quantity had been added to our cheese or butter exports for the present year, as it would have been without the cream trade, the increased exports in these two articles would have been that much larger.

EXPORTS OF DAIRY PRODUCTS INCREASING.

Having these figures before us, we are now able to determine the total exports for the fiscal year which ended on March 31, and a comparison with previous years will be interesting at this point.

COMPARATIVE VALUE OF EXPORTS FOR YEARS ENDING MARCH 31, 1909, 1910 and 1911.

	1911.	1910.	1909.
	\$	\$	\$
Cheese .....	20,739,507	21,607,692	20,384,666
Butter.....	744,288	1,010,272	1,521,486
Condensed Milk .....	469,406	541,372	90,520
Fresh Milk .....	4,276		
Cream.....	1,714,528		
Casein.....	37,009		
	23,709,014	23,159,336	21,996,622

Now, I wish you to note that the total value of the exports for the past year, in spite of lower prices for cheese\* shows a substantial gain over the two previous years,

\* The difference between the price of cheese in 1909 and 1910 amounts to about \$1,000,000 on the season's output.



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so that since 1908 our surplus for export has been increasing, not decreasing, as is frequently stated. In considering this matter, we must always include all products to make a fair comparison.

If we compare the past year with the year ending June 30, 1903, in which year the exports reached the record value of \$31,667,561, we find the shrinkage is only \$7,958,547. But this is not the whole story by any means, for we must take into account the enormously increased home consumption in the meantime. Few people seem to realize what a great difference an increase of, say, 2,000,000 people has made in this respect. I have endeavoured to estimate the average per capita consumption of milk, cream, butter and cheese in Canada, by approaching the question from many different points of view, and I am convinced that it amounts to not less than \$10 per head on the average, at the present level of wholesale prices. With our present growth in population, that means an increase of over \$2,000,000 a year in home consumption. The general prosperity of the people has resulted in a steady increase in the consumption of milk, cream, butter and ice cream of late years, and I feel that it is safe to say that the home consumption of these products this year is \$25,000,000 greater than it was in 1903.

Now, let us see where we stand, compared with 1903, if we take into account the increased home consumption.

Total exports, 1910-11.....	\$ 23,709,014
Add increased consumption as compared with 1902-3.....	25,000,000
Exports in 1902-3. ....	48,709,014 31,667,561
Increase in production in 1910-11 as compared with 1902-3.....	17,041,453

It must be apparent to any one that, in order to determine the value of our export dairy trade as at present constituted, we must now consider several products in addition to butter and cheese, and that the trade with the United States is constantly growing in importance, as the following table will show.

EXPORTS TO UNITED STATES.

The Values of Dairy Products Exported to the United States during the Years ending March 31, 1908, 1909, 1910 and 1911.

	1911.	1910.	1909.	1908.
	\$	\$	\$	\$
Cheese.....	36,034	23,995	19,428	17,732
Butter.....	91,313	199,854	18,246	38,899
Cream.....	1,714,528			
Condensed Milk.....	11,474	220,446	8,256	2,737
Casein.....	37,008			
Sweet Milk.....	3,257			
Totals.....	1,893,615	445,295	45,930	59,368

Down to the beginning of the past fiscal year, the exports of sweet milk, cream, condensed milk and casein were included under one head in the Trade and Navigation returns.



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## OLD BASIS FOR ESTIMATING PROGRESS OF INDUSTRY ERRONEOUS.

I have dealt at some length with these points, because I look upon it as most important that any misconception as to a decline in the dairy industry of Canada should be effectually removed. To have such statements constantly repeated would be one of the surest ways of bringing about such a result. There are a great many people who reach their conclusion in such matters from what others say rather than from their own reasoning. There are many people who would be inclined to give up dairying if they heard that others were doing so. All this goes to show the advisability of getting away from our old habit of judging the progress and the extent of the dairy industry by the surplus of butter or cheese which there may be for export to Great Britain. That method served well enough to show the annual growth of the industry when the population was increasing very slowly, but, with the rapid increase of late years and the consequent enormous growth in the home consumption of milk, butter and cheese, it has proved to be entirely misleading. When we consider that the total production of milk in this country reaches the enormous value of about \$100,000,000 a year, it becomes apparent at once that the small part of that which is exported does not, and never did, for that matter, adequately represent the volume and magnitude of the industry.

To take another view of the present situation and the inferences that may be drawn from it for the future, I would ask consideration for a moment to some of the conditions which prevail in other provinces.

## OUTLOOK BY PROVINCES.

In the maritime provinces the dairy industry is making some progress, especially in Prince Edward Island and in Nova Scotia. The output of cheese in the former province made a gain of over 30 per cent in 1909 and shows a still further, though smaller, increase in 1910. Very unfavourable weather during the latter part of the season curtailed the supply of milk. Every cheese factory and creamery in Nova Scotia increased its output in 1910 by 8 to 214 per cent over 1909, the total increase being 18 per cent for cheese and 50 per cent for butter.

There have been some marked increases in the prairie provinces and also in British Columbia, though the quantity produced at present is far short of the needs of those growing communities. Although there are a number of cheese factories in Manitoba and ten or twelve small ones farther west, in Alberta, this branch of the industry makes very little headway, and it should not be encouraged until conditions are more favourable to it.

In Quebec, conditions governing production remain very much as they have been for some years, but there is a growing tendency towards the consolidation of small factories, which will make for improvement, and there is likely to be a change in the working of the system of instruction by bringing the instructors directly under government control and independent of the factories. We may look for good results to follow in more than one direction.

While there are individuals here and there who, for one reason or another, have given up dairying, and even small districts where the production of milk shows a decrease, there is, on the whole, throughout the Dominion a good healthy tone to the industry. The present high price of cows is a good indication of the attitude of farmers towards it, and it is gratifying to note that buyers are now showing more discrimination in favour of good milking strains.

## COW TESTING.

Those of us who have been in close touch with the cow testing movement since it was started are able to see a very decided, if somewhat tardy, awakening of interest



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in that work. This question of herd improvement, in my judgment, is the most important one which may engage the attention of milk producers or factory owners. That is why the Dairying Service at Ottawa is giving so much attention to it. We are prepared to extend this work as fast as the farmers are ready to take it up, and to lend encouragement in every reasonable manner. I am pleased to announce that the Minister has approved of a plan for the further promotion of this work, whereby we shall have men in charge of small districts covered by four or five cheese factories or creameries, so that they will be able to get into touch with all the patrons and secure the average milk records of all the herds even when the owner will not undertake to keep individual records. The information obtained in this way will be accurate and instructive, and the constant presence of an enthusiastic advocate amongst the farmers is bound to have a stimulating effect.

The cow testing movement has not spread as rapidly as it might have been expected to spread, considering the important relation which it bears to profitable dairy farming, but we are making progress, and the number of cows recorded has increased largely every year. I believe the common sense of the majority of Canadian milk producers will eventually lead them to adopt a plan which offers so much in return for comparatively little labour and outlay.

Already we have records from many herds showing increases of 20, 25 and even 30 per cent in the average yield, as the result of an intelligent application of the knowledge gained through the systematic study of the performance of individual cows. If the average yield per cow could be increased by only 500 pounds of milk a year, it would mean an additional annual production of over \$10,000,000 in Canada. That would be one of the simplest and easiest things to do, if all farmers could only be made to realize to the point of action the possibilities which lie before them in this direction. I predict that a large proportion of the cows in Canada will in a few years yield fully 50 per cent more than they do at present. Indeed, there is good reason to believe that much of the increase in production which I have outlined may be traced to this source, as the number of cows does not appear to have increased in proportion to the increased output.

## THE MARKET OUTLOOK

Turning now to the market end of this discussion, I would say at the outset that there is nothing in sight which need offer the slightest discouragement to a largely increased production. The home market, which, as I have already shown, absorbs something like \$80,000,000 worth a year of milk and its products, is expanding rapidly, and at the present rate of increase would wipe out our surplus for export in less than ten years if production remained stationary. As a matter of fact, our export trade would have been wiped out already had there not been a large increase in production since 1903. But I do not think there is any immediate danger of losing our export trade either for lack of a market or for lack of something to supply it with. The maw of Great Britain is never satisfied and we always have that market open to us on even terms, at any rate.

Trade with the West Indies continues to grow steadily. Canadian butter and cheese have become well established in that part of the world.

In the United States, although that country is the largest producer of dairy products in the world, the supply has for several years fallen short of the demand and they have imported butter and cheese to the value of \$9,122,884 during the calendar year 1910—nearly double the imports of 1907. Canada is a natural source of supply for the United States, and our trade is likely to grow in that direction.

## NEW ZEALAND AS A FACTOR.

The situation in the markets of Great Britain in regard to Canadian cheese has changed somewhat since the New Zealand imports have become a factor in the trade.



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The shipments of New Zealand cheese have increased from 9,000,000 pounds for the year ending June 30, 1904, to 50,000,000 pounds for the same period ending in 1910. It will depend very largely on the relative price of butter and cheese whether the increase will be continued or not. Private advices from New Zealand intimate that the present season began very badly with cold weather and much lack of rain in some districts, and that the cheese shipments for the season just beginning are much smaller than they were last year.

The arrival of 50,000,000 pounds of New Zealand cheese on the market during our winter months has lessened the speculative demand for Canadian cheese to supply the winter trade, but we gain from the fact that a larger proportion of our summer cheese is now wanted for immediate consumption and a higher level of prices is maintained during the period of greatest production. Formerly the demand fell off at that season, as a result of over-supply, and much of the cheese found a sale only when the price went low enough to encourage buying on a speculative basis.

It is rather remarkable that the increase in New Zealand receipts for the year ending June 30, 1910, as compared with 1904, should tally so closely with the decrease from Canada for the same period. The difference between the increase on the one hand and the decrease of the other was only 538,200 pounds, the decrease from Canada being that much less than the increase from New Zealand.

#### GREAT BRITAIN'S IMPORTS DECLINING.

There is another feature of the market situation which is worth noting. If we take the average imports of cheese into Great Britain from all countries for the years ending June 30, 1900 and 1901, and compare them with the average for 1909 and 1910, we find that the quantity has fallen off to the extent of over 44,000,000 pounds. This is taken by some to represent a decline in the consumption of cheese in Great Britain. The shortage is probably partly met by an increased home supply. It is claimed that there has been a large increase in the output of Cheshire cheese of late years. The home production of cheese in Great Britain, like the home consumption in Canada, is only estimated, but it is well to bear in mind that Great Britain, next to the United States, is the largest cheese-producing country in the world, and much larger than Canada.

If the decline in the imports of cheese into Great Britain really does mark a smaller consumption—and I think there is some truth in that claim—it becomes a matter of no little importance and is well worth inquiring into.

#### HARM DONE BY GREEN CHEESE.

Personally, I believe that the immature condition in which much of our cheese has been put on the market has had a great deal to do with it and with the lower price which prevailed in England for Canadian cheese during the past summer. There have been very serious complaints on this score, especially since the cheese has been going more directly into consumption. With strange perverseness, we have shipped our cheese greener at the very time when they should have been more fully ripened. I have spoken rather plainly on this subject on other occasions, and I think the present is a good time to do so again, for I believe it has cost the cheese factory patrons of Canada nearly a million dollars in reduced prices in 1910, to say nothing of the injury to our reputation and the effect that it may have in the future. I know all the arguments that are used to excuse the practice, most of which are unsound, and although there may be some temporary advantage in getting rid of cheese when only a few days old, we will reap the consequences of our folly in the end.

It seems to me, Mr. President, that this is the sort of question which your association should deal with, because it is your members who are most interested and who will suffer if mistakes of this kind are made.



## SESSIONAL PAPER No. 15a

## CANADA STILL HOLDS PREMIER POSITION.

Now, I don't want any one to imagine for a moment that Canada has lost, or is yet anywhere near losing, her premier position in the cheese markets of Great Britain. We still supply about 65 per cent of the total imports, and 77 per cent of the kind which we make, and, apart from the green condition, the quality of our cheese has improved of late years.

I do not wish either in anything that I have said respecting the extent of our home trade or the trade with the United States, to minimize the importance of the export trade with Great Britain. As long as we have a surplus for export, the value of the whole production is determined very largely by the price which is obtained for that surplus. We should guard very carefully, therefore, our interests in this connection and see to it that nothing is allowed to injure the high reputation which our cheese especially, has attained on that market.

## SOME STATISTICS OF THE EXPORT TRADE.

## TOTAL EXPORTS OF CHEESE AND BUTTER IN FISCAL YEARS 1880 TO 1911, INCLUSIVE.

BUTTER.			CHEESE.		
Year.	Quantity.	Value.	Year.	Quantity.	Value.
<i>Years ending June 30.</i>	Lbs.	\$	<i>Years ending June 30.</i>	Lbs.	\$
1880.....	18,535,302	3,058,069	1880.....	40,368,678	3,893,366
1890.....	1,951,585	340,131	1890.....	94,260,187	9,372,212
1891.....	3,768,191	602,175	1891.....	106,202,140	9,508,800
1892.....	5,736,696	1,056,058	1892.....	118,270,052	11,652,412
1893.....	7,036,013	1,296,814	1893.....	138,946,365	13,407,470
1894.....	5,534,621	1,095,588	1894.....	154,977,489	15,488,191
1895.....	3,650,258	697,476	1895.....	146,004,650	14,253,002
1896.....	5,889,241	1,052,089	1896.....	164,689,123	13,956,571
1897.....	11,453,351	2,089,173	1897.....	164,220,699	14,676,239
1898.....	11,253,787	2,046,686	1898.....	196,703,323	17,572,763
1899.....	20,139,195	3,700,873	1899.....	189,827,839	16,776,765
1900.....	25,259,737	5,122,156	1900.....	185,984,430	19,856,324
1901.....	16,335,528	3,295,663	1901.....	195,926,397	20,696,951
1902.....	27,855,978	5,660,541	1902.....	200,946,401	19,686,281
1903.....	34,128,944	6,954,618	1903.....	229,099,925	24,712,943
1904.....	24,568,001	4,724,155	1904.....	233,930,716	24,184,566
1905.....	31,764,303	5,930,379	1905.....	215,733,259	20,300,500
1906.....	34,031,525	7,075,539	1906.....	215,834,543	24,433,169
<i>Years ending Mar. 31.</i>			<i>Years ending Mar. 31.</i>		
1907 (9 months).....	18,078,508	4,011,609	1907 (9 months).....	178,141,567	22,006,584
1908.....	4,786,954	1,068,703	1908.....	189,710,463	22,887,237
1909.....	6,326,355	1,521,436	1909.....	164,907,139	20,384,666
1910.....	4,615,380	1,010,274	1910.....	180,859,886	21,607,692
1911.....	3,142,682	744,288	1911.....	181,895,724	20,739,507

## DETAILED EXPORTS FOR YEAR ENDING MARCH 31, 1911.

To all Countries.	Quantity.	Value.
Butter..... lbs.	3,142,682	\$ 744,288
Cheese..... "	181,895,724	20,739,507
Cream..... galls.	1,823,821	1,714,528
Fresh milk..... "	39,775	4,276
Condensed milk..... lbs.	6,584,828	469,406
Cascia..... "	1,515,172	37,009
Total value.....		23,709,014







SESSIONAL PAPER No. 15a

DETAILED STATEMENT OF EXPORTS OF BUTTER IN FISCAL YEARS 1902 TO 1911, INCLUSIVE.  
(Years ending June 30, 1902 to 1906; years ending March 31, 1907 to 1911.)

To	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Great Britain .....	5,159,300	6,554,014	4,400,77	5,768,999	6,892,003	3,805,925	823,761	1,273,484	587,493	401,621
British West Indies .....	71,816	112,968	127,790	80,323	87,055	59,313	85,371	95,370	76,026	70,444
British Guiana .....	6,796	7,565	6,412	8,929	11,651	8,113	12,861	7,711	9,197	10,682
Other British Possessions .....	284	72					5		514	1,423
Newfoundland .....	47,066	69,017	82,422	82,387	48,233	56,516	34,931	51,552	50,674	57,198
China .....	78	141	1,763	562	761	5,041	1,319			
Cuba .....	243	202	796	658	285	1,034	720	96	22	985
Danish West Indies .....	1,581	6,077	5,868	4,473	4,560	3,664	4,939	4,418	4,697	1,438
French West Indies .....	101	1,020								
Germany .....		13	25,64						9,777	
Hawaii .....		115								
Haiti .....		38								
Japan .....	1,013	1,816	6,017	6,196	9,373	9,662	4,258	3,019	1,002	840
St. Pierre .....	27,102	28,655	26,98	21,827	17,668	17,615	18,749	14,740	14,036	18,566
United States .....	41,149	10,225	6,497	70,580	33,965	3,539	38,899	18,246	199,854	91,313
British Africa .....	12	133,958	16,417	1,914	2,056	265		22,458	1,873	10,460
Mexico .....		4,685			1,268	484	265	660	936	59
Brazil .....	1,608	9,084								
Dutch West Indies .....	2,040									
U. S. Colombia .....	92	1,175	2,272	240	1,747	2,115		1,165	832	
Australia .....	260	6,187								
Bermuda .....				59,482	47,015	33,900	33,177	11,273	43,638	54,665
France .....			14	14,410	4,155					
San Domingo .....		1,351								
Holland .....			8,175	13,680						
Venezuela .....		6,240								
Belgium .....			10	116						
Central America .....			686	1,062	3,431	1,932	9,118	7,074	2,590	3,918
Corea .....				15					15	
Dutch Guiana .....				186	30	40			48	
Turkey .....				50		21				
Porto Rico .....					170					
Panama .....								4,229	7,320	19,881
Austria-Hungary .....								1		
Alaska .....										771
Totals .....	5,464,541	6,954,618	4,724,155	5,930,379	7,075,539	4,011,069	1,068,703	1,521,436	1,010,274	744,288



DETAILED STATEMENT OF EXPORTS OF CHEESE IN FISCAL YEARS 1902 TO 1911, INCLUSIVE.  
(Years ending June 30, 1902 to 1906, and years ending March 31, 1907 to 1911.)

To	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Great Britain.....	19,620,239	24,620,004	24,099,004	20,174,211	24,300,908	21,909,879	22,763,736	20,268,166	21,481,566	20,577,542
Australia.....	6,862	6,913	6,247	5,411	5,350	245	525	223	171	88
British Africa.....	868	2,514	7,559	10,612	16,623	18,261	16,362	12,466	16,425	22,601
B. W. Indies.....	18,542	44,674	34,253	36,176	25,509	13,666	27,533	26,940	24,035	2,814
B. E. Indies.....	60	40	315	62	20					
British Guiana.....	1,833	2,165	1,193	2,571	3,860	3,143	6,228	4,452	5,232	4,747
Other British Possessions	746	553	216				9	1	1,011	1,575
Hong Kong.....		161	1,253	1,079	1,029		851	2,452	733	1,077
New Zealand.....	216	983	1,039	1,642	1,795	1,690	1,362	54	1,267	467
Newfoundland.....	20,100	21,334	21,754	35,171	30,992	37,748	35,792	41,163	36,912	39,855
Belgium.....			10	22	287		2,080			1
Argentina.....		14								
Cuba.....	350	331	211	102	811		57		17	419
China.....	1,409	1,734	1,899	2,013	2,195	2,206	1,572	568	756	1,040
Danish West Indies	332	2,037	1,936	2,046	2,056	1,568	1,985	1,937	2,453	2,148
France.....			44	700	7,205		10	81		5,534
Japan.....	821	1,076	1,609	759	775	1,071	1,444	2,200	1,208	2,700
Philippine Islands		289	100							
St. Pierre.....	158	120	356	341	875	318	190	364	311	338
United States.....	12,038	7,779	5,386	14,182	16,082	6,900	17,732	19,428	23,995	36,034
Dutch West Indies..	535									
Norway and Sweden				101	991					
Germany.....	1,171	170		364		54			102	
Bermuda.....				12,505	14,033	9,080	9,245	3,174	11,385	1,126
Dutch Guiana.....		15	23	18	13	9				
Egypt.....		30								
Mexico.....			159	329	1,594	630	168	499	108	77
French West Indies										
Central America.....				80			347	3		112
Holland.....					97	110				
U. S. of Colombia.....					68					
Other countries.....							6		5	142
Totals.....	19,683,491	24,712,941	24,184,566	20,300,500	24,433,169	22,006,584	22,887,237	20,384,666	21,607,692	20,739,507



SESSIONAL PAPER No. 15a

FROM THE ASSISTANT DAIRY COMMISSIONER TO THE DAIRY AND  
COLD STORAGE COMMISSIONER.

SIR,—I beg leave to present you my twenty-first report as Assistant Dairy Commissioner, which covers the period of 12 months, and ending March 31, 1911.

## SUMMARY.

I have devoted all my time to the province of Quebec, and I have, during the period under review, delivered lectures before 22,696 persons, of whom 335 were butter and cheese makers. The average attendance was 130. Out of the 111 localities visited, I went for the first time to 16 of them. I have travelled 6,937 miles to perform my work.

I give here a list of the counties and localities which I have visited and where I have delivered lectures, with reference letters, indicating the purpose of meeting.

## TABLE OF VISITS AND LECTURES.

Reference letters indicate:

- (a) Provincial and federal meetings
- (b) County and district meetings.
- (c) Farmers' Club meetings
- (d) Parish meetings.
- (e) English lectures.
- (f) Visits in college and schools.
- (g) Factory inspection.

## PROVINCE OF QUEBEC.

Counties.	Localities.	Visits.	Lectures.	Reference Letters.
Arthabaskaville .....	Arthabaskaville.....	1	2	g
	St. Christophe.....	4	8	
	St. Norbert.....	2	4	
	St. Paul de Chester.....	7	14	
	Ste. Hélène.....	1	2	
	Stanford.....	5	10	
	Victoriaville.....	2	2	
	St. Joseph.....	1	2	
Beauce.....	Chicoutimi.....	3	2	a, b, f, g
Chicoutimi .....	Jonquières.....	1	2	
	Laternière.....	2	1	
	St. Alphonse.....	1	2	
	Ste. Anne.....	1	2	
	Compton.....	1	1	
	Cookshire.....	1	1	
	Martinville.....	1	1	
	Paquetteville.....	1	2	
Compton .....	Popeville.....	1	1	c
	St. Henri (East Hereford)...	1	1	
	St. Malo.....	1	2	
	St. Edwidge.....	1	1	
	Waterville.....	1	1	
	Macdonald College.....	1	2	
	Rivière Ouelle.....	1	1	
	St. Alexandre.....	1	1	
Jacques Cartier.....	St. Denis.....	1	2	a, e, f
Kamouraska.....	St. Pacôme.....	1	1	
	St. Pascal.....	1	1	
	St. Philippe.....	1	1	
	Ste. Anne de la Pocatière.....	1	1	
	Ste. Hélène.....	1	1	



PROVINCE OF QUEBEC—*Continued.*

Countries.	Localities.	Visits.	Lectures.	Reference Letters.
Lake St. John .....	Hebertville.....	1	..	gg
	Normandin.....	2	2	gg
	Péribonka .....	1	2	gg
	St. Cœur de Marie.....	2	2	gg
	St. Félicien.....	2	2	gg
	St. Gédéon .....	1	..	gg
	St. Henri de Taillon .....	1	2	gg
	St. Joseph d'Alma.....	2	2	gg
	St. Louis Nazaire.....	1	..	gg
	St. Prime.....	1	..	gg
	St. Wilbrod.....	1	1	gg
	Ticouabé.....	1	2	gg
L'Islet .....	L'Islet .....	1	1	cc
	St. Aubert.....	1	1	cc
	St. Jean Port Joli.....	1	1	cc
	St. Roch des Aulnaies.....	1	1	cc
L'Islet .....	St. Louise.....	1	1	cc
Matane.....	Matane.....	1	1	cc
	Montjoly .....	1	1	cc
	Ste. Angèle.....	1	1	cc
	Ste. Félicité.....	1	1	cc
	Sandy Bay.....	1	1	cc
Megantic.....	Ste. Sophie.....	1	2	cc
Montmagny .....	Cap St. Ignace .....	1	1	cc
	St. Pierre.....	1	1	cc
	St. Thomas.....	2	1	c, s.
Pontiac.....	Lorrainville.....	2	1	c, s.
	North Temiscamingue.....	1	1	d
	St. Bruno de Guigues.....	2	1	c, s.
	St. Edward de Fabre.....	1	1	cc
	St. Isidore.....	1	1	cc
	St Placide.....	1	1	dd
	Ville-Marie.....	1	1	d
Portneuf.....	Notre Dame des Auges.....	1	1	cc
	Rivière à Pierre .....	1	1	cc
	St. Alban .....	1	1	cc
	St. Casimir.....	1	1	cc
	St. Leonard.....	1	1	cc
	St. Mare des Carrieres.....	1	1	cc
	St. Raymond .....	1	1	cc
	St. Réme.....	1	1	cc
	St. Thuribe.....	1	1	cc
	St. Ubalde .....	1	1	cc
	Ste. Catherine.....	1	1	cc
Quebec City.....	Quebec.....	2	..	a.
Rimouski .....	Bic.....	1	1	cc
	Rimouski.....	1	1	cc
	St. Fabien.....	1	1	cc
	St. Simoa.....	1	1	cc
	Ste. Luce.....	1	1	cc
Sherbrooke .....	Sherbrooke.....	1	..	a
	Sherbrooke, East.....	1	3	a
St. Hyacinthe.....	St. Hyacinthe .....	1	4	a, e
Stanstead .....	Benford.....	1	1	cc
	Coaticook.....	1	1	cc
	St. Wilfrid de Kingscroft.....	1	1	cc
Temiscouata.....	L'Isle Verte.....	1	1	cc
	Notre Dame du Lac.....	1	1	cc
	St. Arsène.....	1	1	cc
	St. Eloi.....	1	1	cc
	St. Epiphane.....	1	1	cc
	St. Jean de Dieu.....	1	1	cc
	Ste. Francoise.....	1	1	cc
	Trois Pistoles.....	1	1	cc
Terrebonne.....	St. Hyppolite.....	1	1	cc
	St. Janvier .....	1	1	cc
	St. Jerome.....	1	1	cc
	St. Sauveur.....	1	1	cc
	Ste. Adele.....	1	1	cc



SESSIONAL PAPER No. 15a

PROVINCE OF QUEBEC—*Continued.*

Counties.	Localities.	Visits.	Lectures.	Reference Letters.
Terrebonne. ....	Ste Agathe.....	1	1	d
	St. Anne des Plaines... ..	1	1	c
	St. Lucie.....	1	1	..
	St. Marguerite... ..	1	1	c
	St. Sophie... ..	1	1	c
	St. Therese.....	1	1	c
	Terrebonne.....	1	1	c
Two Mountains... ..	La Trappe.....	1	1	a, c, f
Wolfe.....	St. Nord.....	5	10	g
	St. Dame de Sham.....	2	4	g
	St. Adolphe de Dudswell....	1	1	c

## NOTES ON A VISIT TO TIMISKAMING.

Acting on your instructions I attended a series of meetings in the western part of Pontiac county, known as Timiskaming, in company with Mr. J. N. Lemieux, for the purpose of addressing a series of special dairy meetings.

I visited Timiskaming for the first time in 1898, and here is what I wrote about it, as a report of my trip: 'Timiskaming, or "Lake Timiskaming" as the region is called, is a district situated at the western end of Pontiac county. Though fairly well settled now by farmers, it is still a lumbering country. I found that there is a first-class field for dairying and cattle raising. Land is good either for grain growing, hay production or grazing. Plenty of good grass, abundant and excellent water, and cool temperatures, make it a first-class district for the production of milk, cheese and butter. On the other hand, the proximity of the forest where thousands of lumbermen spend more than half the year, brings a strong demand for meat, and there is no doubt that dairying, the raising of all the calves and the feeding of hogs in connection with dairying, are the three industries opened to the Timiskaming farmer.'

When I made the trip to Timiskaming which suggested the above remarks, I visited only one organized parish, called 'Ville-Marie,' which was under the direction of the Reverend Oblate Fathers, and which is situated on the Baie des Perès, in Duhamel township, and another parish in formation called 'St. Bruno des Guigues,' where a chapel was built and which was under the direction of the Ville-Marie reverend Oblate Fathers. I went also, during the second trip through a mission where a chapel had been already erected and where they were building a first house. It was the locality then called 'La Tête du Lac' (Head of the Lake) and it was also under the direction of the Ville-Marie Fathers.

As to dairying in 1898, an effort was being made to organize a butter factory at Ville-Marie, an enterprise which has proved unsuccessful.

To-day in that district, agriculture begins to be fairly organized, under the regulations of the Quebec Department of Agriculture. We found six farmers' clubs in the localities of Lorrainville, Fabre, St. Bruno de Guigues, St. Eugene de Guigues, St. Isidore and St. Floride. At the very moment we were there, they had organized a third agricultural society for the Timiskaming region, besides the two others that are in existence in the eastern part of Pontiac county.

There are now in Timiskaming three cheese factories and one creamery, the latter at St. Bruno de Guigues. That factory had, last summer, 36 patrons with a maximum of 2,300 pounds of milk daily. The cheese factory is the property of Mr. N. Boivin. At St. Edward de Fabre, there is a cheese factory owned by Messrs. Goulet and Demero.



These factories, so poorly supplied with milk as they are to-day give very little satisfaction to the owners from a financial point of view. The bovine population of this district is not numerous, being about 2,000 head, of which 1,600 are milch cows, but if every farmer who could be a patron of one of these factories was inclined that way they could produce very good results. Many of them do not understand the advantages they would reap from bringing their milk to the factories. This applies to those who have been enticed to buy hand separators with the idea that the fact of the possession of one of these machines communicates the science of buttermaking with perfection.

#### ADVANTAGES THAT TIMISKAMING OFFERS TO ITS INHABITANTS.

From an agricultural point of view, Timiskaming constitutes a fine region for colonization. The soil, generally of a clayey and calcareous composition, is very rich and we have seen there magnificent crops of oats, with the grain averaging 45 pounds to the bushel, an indication that the fertility of the soil is good. In the whole region we found that the second crop of clover had grown up with a remarkable vigor, and on the lands where the farmers have not indulged too much in hay growing to sell to lumbermen, some reports were made to us of three tons of hay to the acre. The crops of 1910 were remarkably abundant. Besides hay and oats, potatoes are extensively grown.

The temperature, which is cold in winter, is, during summer, very favourable to the growth of cereals, including wheat which gives very good yields. The cool nights, during the hot season, are very favourable to the dairy industry, through the influence of such a condition on the preservation of milk.

The proximity of silver mines at Cobalt and Silver Mine, which are fifteen and eighteen miles from Ville-Marie gives to the farmers an almost unlimited market for beef, pork, butter, eggs, fowls, vegetables, &c. The first settlers who came to that region, having an excellent market for the sale of hay and oats to the lumbermen who paid very high prices for those products, have neglected cattle breeding, meat and milk production, and some of them have already so much abused their land by the too continuous production of crops of hay and oats sold out of their farms, that their soil, rich though it is, begins to show sign of impoverishment.

In our addresses to the farmers in Timiskaming we endeavoured to convince them that it would pay them better to give more attention to live stock, to produce more milk and pork, and feed the hay and grain rather than sell it to the lumbermen.

The fact that Ville-Marie merchants import every year hundreds of barrels of pork and large quantities of butter; that the butchers of the same place are obliged to buy their animals for meat along the main line of the Canadian Pacific railway; that meat is sold on the retail market at Ville-Marie at 24 cents pound for beef and 20 cents for pork; that butter sells, retail, for 25 cents a pound in summer and over 30 cents in winter, shows that the Timiskaming farmers have a good market at their doors. They need more milch cows and a few good bulls, to develop the dairy herds. Pork production should receive more attention, and every animal born on the farms should be grown to maturity.

In the third place, it is important that farmers establish on their lands a rotation of crops which can give them all the hay, pasture, green fodder, corn, grains and roots which will enable them to keep and feed many cows, pigs, fowls, to supply the excellent markets in the nearby mining towns of Haileybury and Cobalt.

We encouraged the breeders of dairy cattle to start rational breeding founded on the selection of the best milk cows, by means of cow testing associations and of the selection of the best bulls, and by proper feeding to bring an abundant yield of milk.

As a corollary to all that advice, we have incited the farmers and capitalists of Timiskaming to form co-operative societies for the establishment of butter factories



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rather than cheese factories, for two reasons. The first is that skimmed milk is a necessary by-product for the farmers, who should, as we have advised them, go into cattle raising. The second reason is that there is actually, in the region of Timiskaming, a local market for all the butter that can be made there now, and for a long time in the future.

## MEETINGS IN EASTERN QUEBEC.

We held, Mr. Lemieux and I, our second series of Farmers' Institute meetings, in eastern Quebec, during the months of February and March. Those meetings were held in six counties and in thirty-three localities, between Montmagny and Rimouski.

The subjects, all illustrated with the magic lantern, we have treated in those thirty-three meetings were the following:—

Mr. Lemieux spoke on Improvement of dairy herds, through the study of individual yield; Economic production of milk; The payment of milk by the fat test.

Myself, I spoke on: The formation of the dairy herd; The breeding of dairy cattle; Hygiene in stables.

During that trip, Mr. Lemieux had enough success to organize thirty-two associations for the weighing and testing of milk, amongst three hundred and sixty-five farmers, owners of three thousand four hundred and seventy-three cows.

In this section of eastern Quebec, there are still two counties, Bonaventure and Gaspé where the kind of work we have done this winter in the above mentioned counties would bring as good results, in many localities. As those localities are situated in a region which presents many obstacles for winter meetings, I beg leave to suggest that we could finish that work there during next summer.

## ACKNOWLEDGMENTS.

Mr. Lemieux and I have to offer many thanks to the parish priests of the Timiskaming region and of the six counties where we have travelled for our institute meetings, for the great willingness with which they have advertised our lectures and brought with them the farmers to attend an assembly. Their help and their presence have had much to do with the success of our trips.

## LECTURES BEFORE FARMERS' CLUBS.

Of the one hundred and seventy-four lectures that I have delivered during the last twelve months, seventy-seven have been delivered before farmers' clubs. All our institute meetings were held under the auspices of Farmers' Clubs, except two, and the thirty-nine other lectures before Farmers' Clubs were delivered by myself in the counties of Chicoutimi, Compton, Portneuf, Two Mountains, Terrebonne and Wolfe.

The subjects treated before those farmers' clubs, were those mentioned above as having been given before the Institute meetings and before those, the following: Selection of cows; care of milk; small fruit culture; reform in dairying; mixed farming and the markets; weeds; rural and domestic economy; usefulness of farmers' clubs; chemical manures.

## LECTURES BEFORE PARISH MEETINGS.

I have lectured, this year, in only three parishes where no farmers' clubs are yet established, Cookshire, in Compton county, and North Timiskaming, and Ville Marie in Pontiac county. I have especially urged the farmers of those three parishes to join the movement of association and co-operation found now everywhere, so as to profit from the advantages derived from such associations and co-operation.



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## VISITS TO SCHOOLS AND COLLEGES.

I have visited this year, the school of household and Domestic Science of Chicoutimi, MacDonald College, and the Oka Agricultural Institute, while I was on the road for my lecture trips.

## FACTORY INSPECTION.

I was invited in May, June and July, 1910, to make the inspection of forty-nine factories, in five syndicates, in the counties of Arthabaska, Chicoutimi, Lake St. John, Wolfe, Megantic, and to deliver lectures before the patrons of those factories. I made the same kind of inspection and gave the same lectures that I have already described in some of my previous reports. I have also visited three other factories and in all, I have inspected fifty-two factories and delivered eighty-two addresses to their patrons numbering 5,481.

## OFFICE WORK.

I give here a list of the memoranda, lectures and papers I have written, during the last twelve months, in addition to my always pretty large correspondence.

- The enemies of the Ginseng plant (an article in French).
- Dairying in Manitoba (an article in French).
- Apropos of Corn (a memo. in English).
- Abstract of an article on 'The Forest and the Farmer,' (an article in Eng.).
- Notes on dairying in New Zealand (an article in French).
- The wearing out of the land (an article in French).
- Reminiscences and Revendications (a lecture in French).
- Whey pasturization in cheese factories (an article in French).
- Through the factory syndicates (a lecture in French).
- A page of Agricultural contemporary history (an article in French).
- The Canada thistle (an article in French).
- Ornamental trees (an article in French).
- Faults in cheese colour (an article in French).
- A sheep farm (an article in French).
- Notes on Timiskaming (a memo. in French and in English).
- An opening concerning cheese co-operative association (an article in French).
- A short chronicle on Dairying (an article in French).
- Tests in dairying (a lecture in French and in English).
- Bibliograph—an agriculture manual, by Abbé Solanet (an article in French).
- A new casein test. (an article in French).
- Plants sheltering noxious insects and fungi (a lecture in French and in English).
- Cleanliness in factories (an article in French).
- Reading matter for Arbour Day (an article in French).
- A few notes on potato culture (an article in French).
- White washes for factories (an article in French).
- Co-operation in fruit growing (a lecture in French and in English).
- Notes on the blooming season of fruit trees in the eastern part of the province of Quebec (memo in English).

## CLOSING REMARKS.

Before closing this report I beg leave to draw your attention to the fact that I find in our French farmers much more of the spirit of progress towards co-operative ideas than they had a few years ago. Dairying will soon be the prevailing industry in the Timiskaming district and before long we will find cow testing associations in



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most of the counties of the province of Quebec. New regulations enacted concerning the laws of hygiene in factories will bring the disappearance of many small factories which have no right to existence and soon non-qualified cheese and butter makers will be men of the past who will never come back.

J. C. CHAPPAIS,  
*Assistant Dairy Commissioner.*

St. Denis (en bas) Que.  
March 21, 1911.

## PROGRESS REPORT ON EXPERIMENTS IN THE CARE OF HAND SEPARATOR CREAM.

OTTAWA, October 1, 1910.

FROM THE CHIEF OF THE DAIRY DIVISION TO THE DAIRY AND COLD STORAGE  
COMMISSIONER.

Under your direction, experimental work on the 'Care of Hand Separator Cream at the Farm,' was carried on at the Renfrew Creamery, Renfrew, Ont., during the months of June, July and August, 1910.

The object of the work was to secure some definite information regarding the temperatures at which cream can be kept sweet for different periods; how best to cool the cream; the effect of keeping the cream in cellars; and skimming a thick and thin cream.

Arrangements were made to take entire charge of the cream from about 40 cows at two farms. Considerable time was spent at these farms fitting up proper places for cooling the cream.

An insulated tank was made for each farm. These tanks were made of inch lumber, with a four inch space filled with mill shavings on the sides, top and bottom. They were lined with galvanized iron, and connections were made with windmill pumps at both farms. This arrangement was not satisfactory. It often happened that just when we required cold water the windmill would not be running, and the water from the elevated storage tanks was nearly always too warm to cool the cream sufficiently to keep it sweet for delivery every other day. It is, however, a very handy way to get water into the tanks when ice and water are used. The tanks were deep enough to put the entire cream can under the insulated cover. We found these tanks an excellent utensil for controlling the temperature of the cream with very little ice and water. We can recommend an insulated tank to any one who is handling hand separator cream.

At one of the farms, the tank was placed in a lattice summer house (plate I, fig. 2) and we had no trouble in keeping a sufficiently low temperature to keep the cream sweet for delivery every other day with water from the well at 48 degrees and changed night and morning. We could not, however, keep cream sweet for delivery twice a week in these tanks with water only; ice had to be used.

At the other farm, there is a very nice milk house 9 x 12 feet, with walls 7 feet high, (plate II, fig. 2). This building has a cement foundation and floor with a gutter along one side connected with a drain, which made it easy to keep the place clean. The separator and insulated tank were in this building. A tin receiver, large enough to hold about a pail and a half of milk, rests on a shelf on the outside of the building, high enough to discharge into a milk can setting inside. The milkers emptied their pails into this receiver, which had a fine wire gauze strained soldered



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over the outlet, and thus strained the milk as it ran into the can inside. When separating commenced, the milk was drawn from a tap at the bottom of the can into a pail and put into the separator. This arrangement kept the milk room clean, especially in muddy weather, as the milkers did not go inside until they were ready to separate the milk, and there were no more utensils to wash than if pails or other vessels had been used to hold the milk.

Immediately after separating, the cream was divided equally into two shotgun cans. The two lots of the same cream were treated differently according to the different experiments. Each lot was delivered separately to the creamery where careful tests were made of the per cent butter fat, acidity and flavour of each. The cream was then put into two small cream vats, ripened and churned according to usual creamery methods.

Samples of the butter were kept in cold storage until December and scored at different periods.

A good deal of interesting and valuable information was obtained from these experiments, but the results were by no means conclusive, and further experiments will have to be made to obtain satisfactory and useful information for buttermakers and creamery patrons.

This work, I trust, will be continued in 1911 and, when completed, the results published in bulletin form.

GEO. H. BARR,  
*Chief, Dairy Division*

### CASEIN.

The dried curd of skimmed milk, which is known by the trade name of 'casein,' is likely to become an important by-product of the separator creamery if the present demand continues.

Casein is made by curdling skimmed milk with a weak solution of sulphuric acid and then getting rid of the free whey by heating and stirring in much the same manner as in the early stages of cheese manufacture. After the whey is run off, the curd is pressed for a few hours and then passed through a special mill, which tears the curd into small pieces. It is then put into a steam dryer out of which it comes as hard as bone and ready for shipment in sacks.

One hundred pounds of skimmed milk will yield 3 to 3½ pounds of dry casein. The whey from casein is said to be nearly as good as cheese whey for feeding purposes.

The special equipment for making casein, including vats, costs from \$300 to \$500, according to the size of the creamery.

The price paid for dried casein during the past year was 7 cts. per pound f.o.b. cars, but higher prices are now being offered.

The manufacture of casein may yet prove to be a strong inducement to patrons of separator creameries to continue that system in preference to the cream gathering or hand separator plan.

The demand for casein arises from its adaptability to a great variety of purposes in the technical arts. It is used for paper-sizing and wood-filling; in the manufacture of paints, pencil erasers, toilet creams and adhesives; as substitutes for ivory; in the preparation of certain proprietary foods and for many other purposes.

### THE MILK TEST ACT.

Reference was made in last year's report to the necessity for legislation to provide for the verification of milk test glassware. 'The Milk Test Act' became law on January 1, 1911. Being analogous to the Inspection of Weights and Measures,





FIG. 1.



FIG. 2.

Farm near Renfrew from which Cream was taken for Experiments.









FIG. 1.

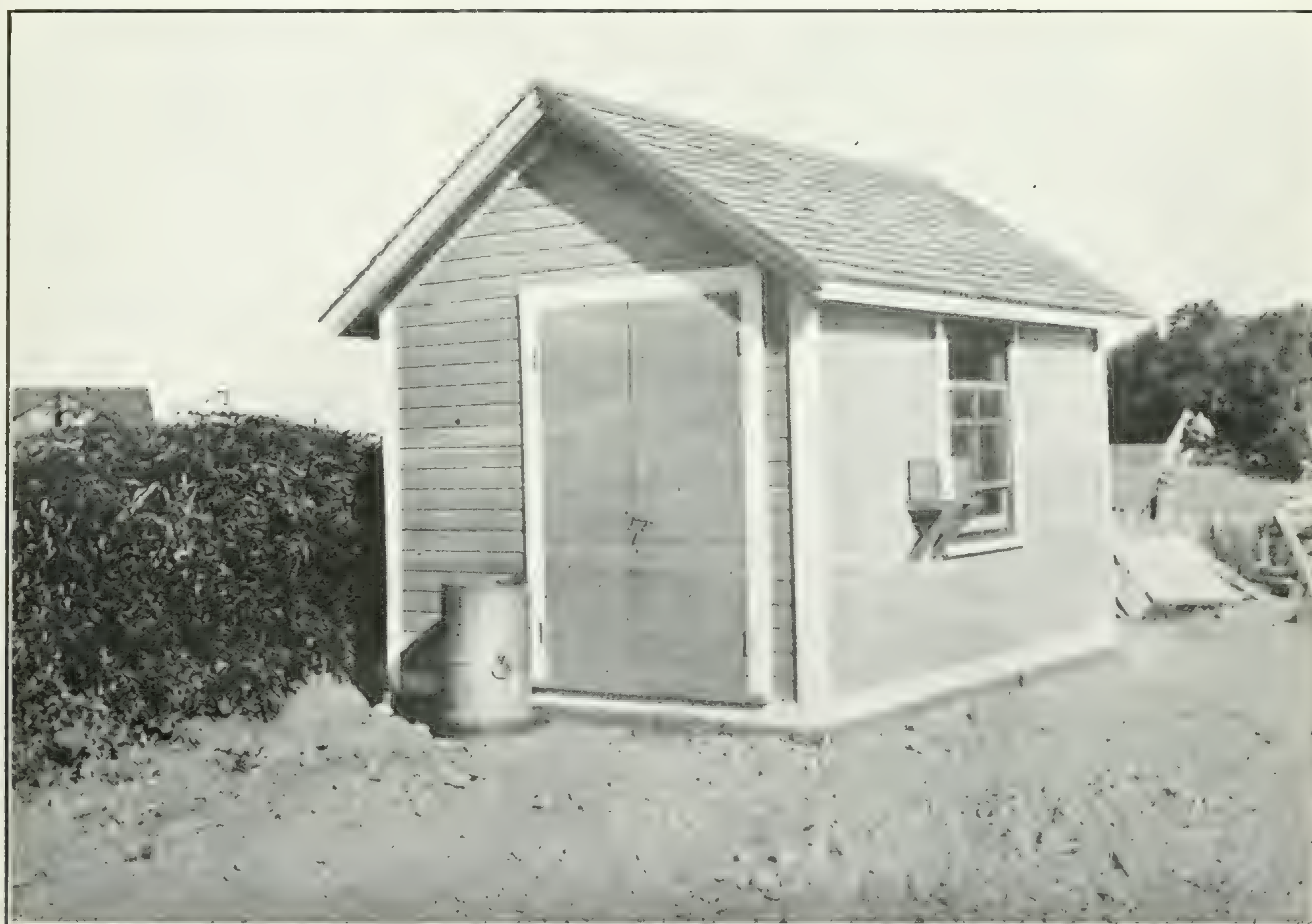


FIG. 2.

Farm near Renfrew from which Cream was taken for Experiments.







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the duty of verifying the glassware was assigned to the Standards Branch of the Department of Inland Revenue, Ottawa. Attention is called to this matter, because many packages of glassware are wrongly sent to this office for verification. The necessary transfer to the Inland Revenue Department involves some delay and unnecessary expense.

The following circular was sent to every cheese factory and creamery in Canada in October last:—

CIRCULAR—D. & C. 2.

DEPARTMENT OF AGRICULTURE,  
OFFICE OF THE  
DAIRY AND COLD STORAGE COMMISSIONER,  
OTTAWA, July 26, 1910.

## THE MILK TEST ACT.

*To Whom it may Concern:*

During the past two or three years, numerous complaints have been received respecting the inaccuracy of the glassware used in connection with the Babcock milk test. A prominent creamery owner sent in a 50 per cent cream test bottle in which the marking showed an error of 10 per cent.

The Chief of the Dairy Division and other members of the staff connected with the cow testing work, have found a large number of test bottles with incorrect graduation, the error in some cases being as much as .6 per cent.

The Dairymen's Association of western Ontario have by resolution asked for legislation to provide protection against the injustice which may arise from the use of this inaccurate glassware.

In view of these facts, the Minister asked Parliament at the last session to pass a law for the proper regulation of this important matter. The law is based on the same principle as that which relates to the inspection of weights and measures.

The full text of the 'Milk Test Act' and the regulations thereunder are reproduced herein for general information.

It will be observed that the Act comes into force on January 1, 1911.

The Chief Inspector of Weights and Measures, Standards Branch, Department of Inland Revenue, has intimated that he will be in a position to receive glassware for verification at any time after October 1 next. This will give ample time to have all test bottles and pipettes now in use verified before January 1, 1911, after which date no unauthorized test bottles or pipettes may be used.

Remittances to cover fees should be in the form of postal notes or express money orders, and payable to the 'Department of Inland Revenue.' Postage stamps cannot be accepted.

## 9-10 EDWARD VII., CHAPTER 59.

## AN ACT TO PROVIDE FOR THE TESTING OF GLASSWARE USED IN CONNECTION WITH MILK TESTS.

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. This Act may be cited as *The Milk Test Act*.

2. Every test bottle, pipette and measuring glass used in connection with the testing of milk or cream shall be tested for accuracy of measurement and accuracy of the per cent scale marked thereon, by such persons and at such places as are designated by the Governor in Council, and if found to be accurate shall be ineffaceably marked in the manner provided by regulations made under this Act.



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2. No other test bottle, pipette or measuring glass shall be so marked, nor shall any unauthorized person mark any test bottle, pipette or measuring glass used in connection with the testing of milk or cream in a manner which would indicate that it is accurate in accordance with this Act or with any regulation made thereunder.

3. No person shall sell or offer to sell any test bottle, pipette, or measuring glass used in connection with the testing of milk or cream unless it has been so tested and marked accurate.

4. No person shall use any test bottle, pipette or measuring glass in connection with the testing of milk or cream, if such testing is for the purpose of determining the value or the relative value of the said milk or cream, unless such test bottle, pipette, or measuring glass has been tested and marked accurate as provided by this Act.

5. Nothing in this Act shall apply to burettes or measures used in connection with the Babcock milk test for the measuring of sulphuric acid.

6. The Governor in Council may make regulations for the operation and enforcement of this Act, and may, by such regulations, establish fees for the verification of the apparatus therein referred to and also provide for the imposition of penalties not exceeding fifty dollars for each offence against this Act or against any regulation made thereunder.

2. Such regulations shall be in force from the date of their publication in *The Canada Gazette*, or from such other date as is specified in the proclamation in that behalf.

7. This Act shall come into force by proclamation of the Governor in Council.

#### PROCLAMATION.

Whereas in and by section 7 of an Act of the Parliament of Canada passed in the session thereof held in the ninth and tenth years of the reign of His late Majesty King Edward the Seventh, chaptered 59, and intituled 'An Act to provide for the testing of glassware used in connection with milk tests,' it is enacted that the said Act shall come into force by proclamation of our Governor in Council.

Now know ye, that by and with the advice of our Privy Council for Canada, we do hereby proclaim and direct that the said Act shall come into force upon, from and after the first day of January, in the year of our Lord one thousand nine hundred and eleven.

Of all which our loving subjects and all others whom these presents may concern, are hereby required to take notice and to govern themselves accordingly.

In Testimony whereof, we have caused these our letters to be made patent, and the Great Seal of Canada to be hereunto affixed. Witness, our trusty and well beloved the Honourable Désiré Girouard, Senior Judge of our Supreme Court of Canada, and Administrator of the Government of our Dominion of Canada.

At our Government House, in our city of Ottawa, this sixth day of July, in the year of our Lord one thousand nine hundred and ten, and in the first year of our reign.

By command.

THOMAS MULVEY,  
*Under Secretary of State.*



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## PRIVY COUNCIL, CANADA.

AT THE GOVERNMENT HOUSE AT OTTAWA,  
The 29th day of June, 1910.

PRESENT:

*His Excellency the Governor General in Council.*

Whereas by section 6 of *The Milk Test Act* it is provided as follows:—

‘The Governor in Council may make regulations for the operation and enforcement of this Act, and may by such regulations, establish fees for the verification of the apparatus therein referred to and also provide for the imposition of penalties not exceeding fifty dollars for each offence against this Act or against any regulation made thereunder.’

Therefore, His Excellency the Governor General in Council is pleased, in virtue of the above cited provisions of the said Act, to make the following regulations, to come into force on the date of their publication in *The Canada Gazette*:—

## REGULATIONS.

1. The duty of verifying the glassware which comes under the provisions of *The Milk Test Act* is hereby assigned to the Standards Branch, Department of Inland Revenue, Ottawa.

2. All test bottles, pipettes, or measuring glasses, used in connection with the testing of milk or cream, except skim-milk bottles and the tubes used in connection with the apparatus known as the ‘Oil Test Churn,’ shall be forwarded, *charges prepaid*, to the Standards Branch, Department of Inland Revenue, Ottawa, for the purpose of verification.

3. All glassware sent for verification shall be received and returned at the owner’s risk.

4. All glassware sent for verification must be perfectly clean on both the inside and outside surfaces.

5. The Chief Inspector of Weights and Measures shall cause each bottle, pipette or measuring glass that is found correct within an error of one-tenth per cent, plus or minus, to be ineffaceably marked with the outline of a crown, having within it the initial letter of the reigning sovereign, and any such glassware not being found correct within the error herein specified, he shall cause to be destroyed without compensation to the owners thereof.

6. The fee for the verification of milk test glassware shall be 5 cents for each test bottle, pipette or measuring glass, which amount shall be forwarded to the Standards Branch, Department of Inland Revenue, Ottawa, with each consignment of glassware to be verified.

7. Packages containing glassware for verification must be plainly addressed, and bear the sender’s name and post office address, thus:—

To the Standards Branch,  
Department of Inland Revenue,  
Ottawa, Ont.

From John Jones,  
Montreal, Que.



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8. A Memorandum in the following form shall be enclosed with the glassware in each package:—

Milk Test Glassware.

To the Standards Branch,  
Department of Inland Revenue,  
Ottawa, Ont.

SIRS,—Please receive herewith the following milk test glassware for verification.

Number of Pieces.	De cription.	Fees.
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Inclosed please find.....in payment of fees.  
This glassware is to be returned to John Jones, Montreal, Que.

9. Any person who violates any of the provisions of *The Milk Test Act* or the regulations made thereunder, shall be liable, on summary conviction thereof, to a fine not exceeding fifty dollars for each offence.

J. A. RUDDICK,  
*Dairy and Cold Storage Commissioner.*

THE OFFICIAL REFEREE OF BUTTER AND CHEESE AT MONTREAL.

There was so little demand for the services of the Referee during the season of 1909, that it did not seem necessary or justifiable to continue the office in 1910. It was with some regret that this decision was reached, for it is believed that if the services of the Referee were utilized as they might be, by the cheesemakers, butter-makers and salesmen, to obtain expert advice of an independent character, the office could be made very useful to the industry in Quebec and eastern Ontario. The Referee was appointed in the first place at the instance of the salesmen, and the position would still be occupied had they not failed to take advantage of it.  
If there is any evidence at any time in the future which would indicate a disposition to make good use of the Referee, it is not likely that there will be any difficulty in having a competent man appointed to the position.

THE SCOTSBURN CREAMERY.

The county of Pictou, Nova Scotia, like many other districts in that province, is well adapted for the creamery industry, but for reasons which are not very clear, the industry made no progress in the county until recently.  
In 1901, the farmers of Scotsburn, about nine miles from the town of Pictou, organized a co-operative creamery. They received some financial assistance from the provincial government, and this Branch undertook to operate the creamery on a commercial basis, charging the usual rate for manufacturing. Progress was slow at



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first, because the farmers needed education along dairy lines, and the class of cows had to be improved to make them profitable producers. Without the support of government operation, the creamery would have failed at the very beginning. It was uphill work at first, but in the last two years, the creamery has become the largest in the maritime provinces. The output of butter in 1910 was 107,715 pounds, and there is every prospect that it will be doubled in 1911.

Having reached this position, there was no longer any justification for government operation and the management was turned over to the Board of Directors on December 31st, 1910.

Many people said that factory dairying could not be made successful in Pictou county. We have proved that it can be, and the confidence which is thus established will be of great assistance in promoting the industry in the future.

## COW TESTING ASSOCIATIONS.

## GENERAL.

In 1910 there were 167 organized cow testing associations in Canada, with 1,143 members recording 11,850 cows. In addition, this Branch received records of 600 cows owned by 60 individual dairy farmers. Besides this, milk record forms were supplied free of charge to large numbers of dairymen who did not make any returns to the office. The general plan of the associations is outlined in bulletin No. 12.

Some members report that they have discontinued sending in records to the department because they have purchased milk testing machines and are making their own tests at home.

The many definite increases given in detail further on are the best proof of the usefulness of the plan. A great many dairymen write of an added yield of 700 or 800 pounds of milk per cow over the 1909 production due largely to better care and attention as a result of weighing each cow's milk twice a day. More than 20,000 forms for daily records were supplied by this Branch.

The following extract from a letter received from a member is typical of many: 'Before testing I offered to sell one cow for \$45. Now that I have her records I would not take \$100 for her.'

At several auction sales of grade cows, prices ranging from \$95 to \$230 were obtained. Why? Because the vendors had records to produce as certificates of efficiency.

Decided improvement is noticeable in the average yield of many herds. Heifers from cows selected on their records and bred to a good pure bred dairy sire are now coming into milk and justifying the wisdom of the procedure.

For instance, in one herd of 18 cows, 11 give a total yield of 111,958 pounds of milk, an average of 10,178 pounds each. No scrub sire is likely to assist in such a performance.

Some good herd averages would be even higher but that the owners as sellers of good breeding stock have sold some of the best cows.

Dairy tests, or milking competitions, were conducted by members of the staff at Woodstock, Ont., Sherbrooke, Que. and Sussex, N.B. These competitions, held at the time of the fall fairs, attracted a very great deal of attention both from visitors on the grounds and through the fact of the detailed results being widely circulated through the public press. At Woodstock, this being the second year of a test of this nature, the effect was to increase considerably the exhibit of cattle. One result likely to follow is that farmers in western Ontario, wanting to purchase really good stock, will come to regard Woodstock Fair as the best market. A cup for competition is promised for the 1911 test by one of the cattle breeders associations.



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At Toronto exhibition, two members of the staff were in attendance in the dairy building to give information specially on cow testing; at Peterborough, Ont., and the Ottawa winter fair, similar work was done, considerable interest was manifested, and the plan thereby brought to the attention of numerous dairy farmers and factory officials.

#### TWO SUGGESTIONS.

Factory owners are becoming alive to the value of cow testing in augmenting the milk supply, thus for one thing decreasing the cost of making, and some are offering to supply members of associations with bottles free of cost.

A similar generous offer was made by the officials of the dairy school at St. Hyacinthe, Que.

It will be remembered that for a competitive cow test the sum of \$1,000 as prizes was lately offered by the publishers of a farm journal in Illinois, this opens a new field for sowing the surplus wealth of some Canadian publishers. A widespread educative movement of this nature might well call forth also the assistance of manufacturers of farm and dairy machinery for instance, because a large, practical, concerted movement of this nature means the addition of a great many thousand dollars to the returns through the factories. It is impossible as yet to gauge the full measure of what this means to hundreds of farm homes. Ambition is displacing indifference, drudgery becomes pleasure, poverty turns to affluence, the wives and children are being provided with more comforts and better education, just in proportion as the poor cows are despatched. Human energy is saved, valuable time is turned to profitable account as the better cows are selected on their records.

For instance, the owner of herd 'B,' Spencerville, in Table I, is keeping *thirteen cows* to produce less milk and fat than is given by *seven cows* in herd 'D,' Innerkip. Think of the extra outlay in every way that this means, cash invested, larger stables, feed, time and most important of all, an enormous equivalent in machine horse-power of good valuable human energy that needs conserving on every dairy farm so that it may be turned to profitable account.

One of the most energetic and enthusiastic group of members is found in the association at Bertie, Ont. As one outcome of cow testing a two-day course in stock judging was arranged for. A tremendous impetus to the whole question of dairying in this progressive district has been given by cow testing.

Other associations might well copy this example. A good live secretary can be of immense service to his association. Probably it would be a good thing for the secretaries of all associations in each province to get together and talk things over with a view of more systematic development of the work. Officers of associations are invited to think about this.

#### BUILDING UP A PROFITABLE HERD.

'Two months ago we sold our poorest cow, she gave 7,014 pounds of milk in just nine months. We have derived considerable benefit from keeping daily records, it is both interesting and profitable:' thus writes one of the members of a Quebec association, and his letter is typical of many that are constantly being received at this office. This is an indication of what really good and profitable herds are being built up by men who decide to discard their poorest cows, even rating as poor cows such as give 7,000 pounds of milk.

Another instance may be quoted to show of what value records are. Mr. W. E. Mason, of Tyrrell, Ont., writes: 'I sold a grade heifer coming three years old for \$150. The chief attraction about her was her record of 6,965 pounds of milk in six months.'

A record of much interest is that of the herd of Mr. Jas. Hotson, Innerkip, Ont. A complete account of the yield of milk and fat as well as cost of feed is kept with



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each cow, with the result that the year's operations show a clear profit above the cost of feed with each of the 13 grade cows varying from \$23.15 from a 3-year-old, up to \$37.25 from an aged cow.

The lowest yield was 6,210 pounds of milk and 232 pounds of fat from the 3-year-old, and even with this comparatively low yield, the average of the herd, including one farrow cow, is 8,249 pounds of milk, and 273 pounds of fat, with an average income of \$65.37 per cow. The average cost of feed was \$33.70, varying from \$29.02 up to \$45, thus the average net profit is \$33.20 per cow.

## RESULTS AT THE METAIRIE ST. JOSEPH, ST. HYACINTHE, QUE.

In 1906, the average yield of 51 cows was 3,997 pounds of milk; in 1907, 45 cows averaged 4,679 pounds; in 1908, with 50 cows the average was 4,561 pounds; in 1909, 45 cows gave 5,495 pounds; and in 1910 the average yield of 48 cows was 5,979 pounds.

This is an increase of 1,982 pounds of milk in four years, or an increase in the yield of *fifty per cent*.

During that time 32 cows have been beefed, and 13 cows in the present herd giving less than 5,000 pounds of milk are to go. There will then be in the herd 15 cows that in 1910 gave 6,000 pounds of milk or over, and 20 cows whose present records run from 7,000 to 9,000 pounds each.

There are 22 heifers on hand now as against 5 in 1906.

In 1906 the average cost of feed was \$23.84 and the net profit \$46.37 per cow. In 1910 the feed cost \$53.90, but the profit was \$84.95 per cow. Thus, while the cost of feed has increased by \$30.06 the net profit has increased by \$38.58.

This shows excellent management on the part both of the Reverend Sisters owning the herd, and the genial farm foreman. Visitors are made cordially welcome, and farmers in the vicinity are highly privileged to have this businesslike herd as an inspiration and indication of what may be done through intelligent cow testing.

A record of interest is that of the herd of Oscar Perreault, St. Paul de Joliette, Que. The total yield of five cows was 21,850 pounds of milk: these are readily divided into two groups.

The three best cows gave 14,250 pounds of skim milk, at	/
15 cents, equals.. . . .	\$ 21 37
Add receipts from the creamery and from butter made at	
home.. . . .	176 16
	<hr/>
	\$197 53
	<hr/>

or an average of \$65.85 per cow.

The two other cows gave 7,600 pounds of skim milk, at 15	
cents, equals.. . . .	\$ 11 40
Add receipts from creamery and from butter made at	.
home.. . . .	58 74
	<hr/>
	\$70 14
	<hr/>

or, an average of only \$35.07 per cow; not much over half the income per cow from the other three.

The five cows brought in as gross receipts a total of \$267.67, while besides the roughage grown on the farm, the only feed purchased was 500 pounds of linseed meal at \$2.25, and 200 pounds of oat chop at \$1.50, a total cost of \$14.25.

It is desired again to call attention to the herd owned by Mr. S. A. Freeman of Culloden, Ont. Last year's report contained a reference to the substantial increase made from 5,149 pounds of milk per cow in 1906 to 6,708 pounds per cow in 1909.



It was then stated that Mr. Freeman hoped to reach a standard of 8,000 pounds per cow for 70 cows. It is particularly interesting to note how one's ideals may advance and enlarge, for Mr. Freeman has recently stated in public that he is now aiming at 10,000 pounds of milk for each of 80 cows.

The 1910 average is 7,515 pounds of milk for each cow, with average cash receipts of \$93 per cow. Twelve of the best cows gave an average of 10,426 pounds each. The gain of 2,366 pounds in the average yield per cow is attributed by Mr. Freeman mostly to weighing and keeping records so as to know definitely which cows to sell.

RECORDS SHOULD BE COMPLETE.

The number of cows whose records are compiled for the full period of lactation could be increased by some thousands if only the members would continue to send in their records for the season instead of discontinuing after six or seven months' weighing and sampling.

The records would then be of infinitely more interest and value. As it stands at present a great many cows of excellent promise have to be omitted just because of this lack of another month or two of records. Could these be included, the average yields here given would be raised, for several incomplete records reach such encouraging totals as 10,506 pounds of milk and 342 pounds of fat and even 12,320 pounds of milk and 377 pounds of fat in eight months, 11,330 pounds of milk and 330 pounds of fat in nine months, and 13,470 pounds of milk and 452 pounds of fat in 10 months.

FEED RECORDS.

There has been a brisk demand for the feed record form supplied by this Branch, and to assist in arriving at the net profit earned by each cow a small herd record book was issued for keeping a monthly account with each cow of the quantities and values of milk, butter fat and feed. This herd record book has met a widespread need.

TABLE I.—Comparisons between Herds in the Province of Ontario for the Full Period of Lactation, 1910

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Arkona.....	A	8	47,751	1,739.8	5,969	3.6	217.4
".....	B	11	59,240	2,151.2	5,585	3.6	195.5
".....	C	3	14,730	521.1	4,710	3.6	173.7
".....	D	4	17,793	678.1	4,448	3.8	169.5
Avonbank.....	A	8	54,376	1,927.3	6,797	3.5	240.9
".....	B	6	40,407	1,443.4	6,734	3.6	240.5
".....	C	14	84,655	2,976.5	6,047	3.5	212.6
".....	D	7	47,122	1,813.9	6,731	4.2	259.1
".....	E	10	64,957	2,177.4	6,495	3.3	217.7
".....	F	9	54,390	2,057.5	6,043	3.7	228.6
".....	G	4	24,237	883.2	6,059	3.6	222.6
".....	H	8	63,177	2,316.6	7,898	3.6	289.5
".....	I	3	19,880	736.4	6,626	3.7	245.4
".....	J	9	55,647	2,060.1	6,163	3.7	228.9
Bertie.....	A	7	47,291	1,769.5	6,755	3.7	252.7
".....	B	2	15,765	625.2	7,882	3.9	312.6
".....	C	2	8,443	288.3	4,221	3.4	144.1
".....	D	1	5,923	224.4	5,923	3.7	224.4
".....	E	2	14,696	511.8	7,348	3.4	255.9
".....	F	1	5,605	198.4	5,605	3.3	198.4



SESSIONAL PAPER No. 15a

TABLE I.—Comparisons between Herds in the Province of Ontario for the Full Period of Lactation, 1910—Continued.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER Cow.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Bertie.....	G	2	11,990	411.4	5,995	3.4	205.7
".....	H	3	26,249	969.9	8,763	3.6	323.3
".....	I	3	12,910	452.3	4,303	3.5	150.7
".....	J	1	5,980	193.4	5,980	3.2	193.4
Black Creek.....	A	1	8,740	301.4	8,740	3.4	301.4
".....	B	7	52,443	1,788.5	7,942	3.4	255.5
".....	C	8	46,922	1,686.5	5,865	3.5	210.8
".....	D	5	44,851	1,465.4	8,988	3.2	293.1
".....	E	2	11,036	391.6	5,518	3.5	195.8
".....	F	8	48,705	1,861.4	6,088	3.8	242.7
Bluevale.....	A	2	13,125	500.7	6,562	3.8	250.3
Burgessville.....	A	7	51,900	1,640.2	7,414	3.1	274.3
".....	B	1	7,100	193.9	7,100	2.9	193.9
".....	C	3	16,280	634.8	5,426	3.9	211.6
".....	D	2	19,430	646.5	9,715	3.2	323.2
".....	E	1	4,835	167.3	4,835	3.4	167.3
".....	F	5	36,085	1,092.7	7,217	3.0	218.5
".....	G	2	19,229	543.2	9,614	2.8	271.6
".....	H	8	40,545	1,397.5	5,073	3.4	174.7
".....	I	2	10,137	347.0	5,068	3.4	173.5
".....	J	2	11,260	380.1	5,630	3.4	190.0
Ballymore.....	A	8	47,790	1,491.8	5,973	3.1	186.4
".....	B	5	25,136	846.3	5,027	3.3	169.2
".....	C	5	28,959	978.8	5,791	3.3	195.7
".....	D	4	24,047	822.0	6,011	3.4	205.5
".....	E	5	29,800	1,018.7	5,960	3.4	203.7
Bathurst Mutual.....	A	9	45,190	1,658.6	5,012	2.6	184.2
".....	B	11	41,737	1,445.7	3,994	3.4	131.4
Brooklin.....	A	1	4,860	158.3	4,860	3.2	158.3
".....	B	3	16,898	589.6	5,632	3.5	196.5
Brooksdale.....	A	4	23,430	828.8	5,857	3.5	207.2
".....	B	9	53,110	1,893.1	5,901	3.5	210.3
".....	C	4	29,581	1,055.2	7,395	3.5	263.8
".....	D	1	3,693	161.6	3,693	4.3	161.6
Camlachie.....	A	2	8,540	327.8	4,270	3.8	163.9
".....	B	6	35,534	1,190.5	5,922	3.3	198.4
".....	C	2	10,130	352.3	5,065	3.4	176.1
Canboro.....	A	5	41,010	1,379.9	8,202	3.3	275.9
".....	B	11	63,392	2,200.1	5,763	3.4	200.0
Cassel.....	A	10	75,674	2,463.1	7,567	3.2	246.3
".....	B	8	40,017	1,362.5	5,002	3.4	170.3
".....	C	4	19,869	657.8	4,967	3.3	164.4
".....	D	1	5,300	167.0	5,300	3.1	167.0
".....	E	5	34,804	1,249.9	6,960	3.6	249.9
".....	F	3	20,365	647.7	6,788	3.1	215.9
".....	G	6	38,411	1,297.1	6,402	3.3	216.2
".....	H	11	75,315	2,751.8	6,846	3.6	250.1
".....	I	3	25,120	877.7	8,373	3.1	292.5
".....	J	2	12,380	438.3	6,190	3.5	219.1
".....	K	2	9,720	347.9	4,860	3.5	173.9
".....	L	14	73,451	2,401.5	5,246	3.2	171.5
".....	M	3	18,900	654.1	6,300	3.4	218.0
Central Smith.....	A	12	71,691	2,484.1	5,974	3.4	207.0
".....	B	2	12,345	457.4	6,172	3.6	228.7
".....	C	13	109,258	3,575.8	8,404	3.2	275.0
".....	D	5	32,454	1,183.4	6,490	3.6	236.7
".....	E	3	24,180	817.0	8,060	3.4	272.3
Corinth.....	A	6	28,020	1,027.7	4,670	3.6	171.3
".....	B	4	19,074	617.5	4,708	3.2	154.3
".....	C	1	4,630	153.0	4,630	3.3	153.0
".....	D	1	5,835	155.3	5,835	2.6	155.3



TABLE I.—Comparisons between Herds in the Province of Ontario for the Full Period of Lactation, 1910—Continued.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Dalmeny .....	A	10	60,436	2,231.4	6,043	3.6	223.1
" .....	B	5	26,788	997.6	5,357	3.7	199.5
East and West Oxford .....	A	14	103,678	3,157.6	7,405	3.0	224.1
" .....	B	4	20,533	876.1	5,133	4.2	219.0
" .....	C	3	28,894	847.2	9,631	2.9	282.1
" .....	D	4	35,211	1,227.3	8,802	3.5	306.8
Elma .....	A	11	43,867	1,501.2	3,988	3.4	136.4
" .....	B	7	40,716	1,521.6	5,816	3.7	217.2
" .....	C	12	64,840	2,298.5	5,403	3.5	191.5
" .....	D	3	15,675	561.3	5,225	3.6	187.1
" .....	E	8	42,607	1,450.7	5,326	3.4	181.3
" .....	F	12	73,393	2,822.8	6,116	3.8	235.2
" .....	G	8	42,579	1,715.1	5,322	4.0	214.4
" .....	H	5	20,699	723.6	4,139	3.5	144.7
" .....	I	11	66,983	2,321.4	6,089	3.4	211.9
" .....	J	9	59,551	2,017.9	6,616	3.3	224.2
" .....	K	7	34,799	1,259.7	4,971	3.6	179.9
" .....	L	10	56,968	1,919.3	5,696	3.3	191.9
" .....	M	11	61,604	2,178.9	5,546	3.5	198.0
" .....	N	8	47,392	1,705.7	5,921	3.6	214.4
" .....	O	7	38,516	1,345.8	5,502	3.5	192.2
" .....	P	4	21,310	754.1	5,327	3.5	188.5
" .....	Q	5	27,903	1,046.3	5,580	3.7	209.2
German Union .....	A	4	20,701	711.3	5,175	3.4	177.8
" .....	B	7	47,160	1,547.4	6,737	3.2	221.0
" .....	C	4	23,450	887.8	5,862	3.7	221.9
" .....	D	6	40,585	1,456.5	6,764	3.6	242.7
" .....	E	10	59,655	2,217.2	5,965	3.7	221.7
" .....	F	11	75,016	2,638.0	6,819	3.5	239.8
" .....	G	6	34,873	1,150.7	5,812	3.3	191.7
" .....	H	6	29,940	935.9	4,990	3.1	155.9
Hickson .....	A	10	68,080	2,435.0	6,808	3.5	243.5
Innerkip .....	A	16	77,350	2,922.4	4,836	3.7	182.6
" .....	B	15	83,025	3,171.8	5,535	3.8	211.4
" .....	C	4	25,093	975.5	6,273	3.9	243.8
" .....	D	7	60,992	1,971.3	8,713	3.2	281.6
" .....	E	4	33,280	1,060.6	8,320	3.2	265.1
Keene .....	A	5	38,933	1,209.7	7,786	3.1	240.1
" .....	B	3	16,340	583.6	5,436	3.5	194.5
" .....	C	4	26,052	876.8	6,513	3.3	219.2
" .....	D	7	44,862	1,541.3	6,408	3.4	220.2
Kerwood .....	A	4	25,792	981.6	6,448	3.8	245.4
" .....	B	1	3,733	139.8	3,733	3.5	130.8
" .....	C	5	26,020	1,250.1	5,204	4.8	250.0
Kintore .....	A	6	44,730	1,447.1	7,455	3.2	241.2
Lorneville .....	A	1	3,980	137.6	3,980	3.4	137.6
" .....	B	5	27,745	956.4	5,549	3.4	191.2
Maple Grove .....	A	5	23,100	907.3	4,620	3.9	181.4
Milton .....	A	15	124,953	4,291.8	8,330	3.4	286.1
" .....	B	2	11,050	382.2	5,525	3.5	191.1
" .....	C	2	18,490	673.6	9,245	3.6	336.8
Morewood .....	A	1	7,410	269.2	7,410	3.6	269.2
McDonald .....	A	16	72,151	2,911.0	4,509	4.0	181.3
Norwich Gore .....	A	11	100,060	3,183.2	9,096	3.1	289.4
" .....	B	6	40,335	1,518.7	6,722	3.7	253.1
" .....	C	2	12,560	404.1	6,280	3.2	202.0
" .....	D	4	25,330	828.4	6,332	3.1	207.1
" .....	E	4	20,965	668.1	5,241	3.2	167.0
" .....	F	3	16,330	490.4	5,443	3.0	163.4
Norwich Junction .....	A	1	3,870	130.8	3,870	3.3	130.8
" .....	B	3	15,132	487.5	5,044	3.2	162.5



SESSIONAL PAPER No. 15a

TABLE I.—Comparisons between Herds in the Province of Ontario for the Full Period of Lactation, 1910—*Concluded.*

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER Cow.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Peterboro .....	A	4	25,799	870.3	6,449	3.3	217.5
" .....	B	6	36,634	1,397.3	6,105	3.8	232.9
Pine Grove.....	A	1	6,318	256.6	6,318	4.0	256.6
" .....	B	1	11,599	483.4	11,599	4.2	483.4
Prescott.....	A	25	142,599	5,012.0	5,700	3.5	200.4
" .....	B	10	50,881	1,547.3	5,083	3.0	154.7
Rockford.....	A	15	130,492	3,889.0	8,659	3.0	259.9
" .....	B	3	13,274	448.9	4,424	3.4	140.6
" .....	C	1	6,380	206.6	6,380	3.2	206.6
Shearer.....	A	7	46,392	1,428.4	6,627	3.0	204.0
" .....	B	8	58,362	1,730.8	7,295	2.9	216.3
" .....	C	12	65,122	2,242.8	5,427	3.4	186.9
" .....	D	11	76,820	2,629.5	6,983	3.4	239.0
Spencerville .....	A	10	47,619	1,595.3	4,761	3.3	159.5
" .....	B	13	54,040	1,827.3	4,157	3.4	140.5
" .....	C	7	28,806	1,036.3	4,115	3.6	148.0
" .....	D	8	39,948	1,442.1	4,993	3.6	180.2
" .....	E	10	52,984	1,888.1	5,298	3.5	188.8
" .....	F	4	20,055	679.1	5,013	3.3	169.7
Spring Creek.....	A	5	60,310	2,003.2	12,068	3.3	400.6
" .....	B	7	49,643	1,513.8	7,092	3.0	216.5
" .....	C	9	71,766	2,492.3	7,963	3.4	276.9
" .....	D	1	7,850	244.0	7,850	3.1	244.0
" .....	E	5	44,459	1,736.9	8,890	3.9	347.4
" .....	F	11	77,895	2,446.9	7,081	3.1	222.4
" .....	G	1	5,130	149.5	5,130	2.9	149.5
" .....	H	6	32,349	1,027.4	5,391	3.1	171.2
" .....	I	7	39,271	1,406.0	5,610	3.6	200.9
Star.....	A	9	58,364	1,793.4	6,431	3.0	199.2
" .....	B	7	43,838	1,456.6	6,262	3.3	208.1
St. George.....	A	5	41,326	1,376.7	8,265	3.3	275.3
" .....	B	3	20,182	698.5	6,727	3.4	232.8
" .....	C	1	3,650	130.9	3,650	3.6	130.9
" .....	D	2	6,660	233.9	3,330	3.5	116.9
" .....	E	3	20,800	669.0	6,933	3.2	223.0
St. Mary's.....	A	4	21,950	767.2	5,487	3.5	191.8
" .....	B	3	18,845	610.3	6,281	3.2	203.4
Thamesford.....	A	13	102,542	3,109.3	7,887	3.0	239.1
" .....	B	10	55,734	1,781.0	5,573	3.2	178.1
Thedford.....	A	6	33,664	1,113.4	5,610	3.3	185.5
" .....	B	2	14,858	467.7	7,429	3.1	233.8
" .....	C	5	33,049	1,038.9	6,609	3.1	207.8
" .....	D	4	24,913	800.9	6,228	3.2	200.2
Trewern.....	A	4	19,921	666.8	4,980	3.3	166.7
Trowbridge.....	A	9	43,377	1,704.8	5,153	3.6	189.4
" .....	B	6	33,672	1,235.0	5,612	3.6	205.8
" .....	C	10	45,691	1,608.6	4,560	3.5	160.8
" .....	D	5	29,279	1,329.2	5,855	4.5	265.8
Wallace.....	A	3	21,911	722.1	7,303	3.3	240.7
" .....	B	6	32,665	1,183.3	5,444	3.6	197.2
" .....	C	5	22,960	751.5	4,592	3.3	150.3
" .....	D	12	59,244	1,997.9	4,937	3.3	166.5
" .....	E	10	39,884	1,394.5	3,988	3.5	139.4
Westwood.....	A	3	15,025	593.7	5,098	3.9	197.9
" .....	B	6	31,618	1,075.9	5,269	3.4	179.3
Wooler.....	A	6	36,547	1,456.6	6,091	3.9	242.7
" .....	B	5	24,018	872.6	4,803	3.6	174.5
" .....	C	8	42,615	1,447.1	5,327	3.3	180.9



2 GEORGE V., A. 1912

The average yield of the 1,185 cows in this table is 6,162 pounds of milk, 3.46 test, 213.3 pounds of fat.

The first glance over the table impresses the fact that this average is very lenient on the herds at Bathurst, Elma and Wallace that reach only to 3,990 pounds of milk, or *2,172 pounds below* the general average.

The comparison in this table between herd A, Spring Creek, and herd B, Bathurst Mutual, reveals the startling fact that the owner of the latter herd would have to keep actually *three times as many cows* to produce as much milk and fat as the former herd.

The *five cows* gave 60,340 pounds of milk; it would thus take *fifteen cows* with an average of only 3,994 pounds of milk each as obtained in herd B to equal the total yield of the five cows.

This seems to be an instance in the one case of the cows working for the farmer, and in the other of the farmer working for the cows.

A good yield is found in herd A, Norwich Junction, where 11 cows average 9,096 pounds of milk, 3.1 test, 289 pounds of fat. This, again, is in strong contrast with herd A, Elma, where 11 cows average only 3,988 pounds of milk, 3.4 test, 136 pounds of fat, *less than half*.

Several such excellent individual yields as:

8,230	pounds of milk,	265	pounds of fat.
8,500	"	"	"
9,000	"	"	"
11,000	"	"	"
11,500	"	"	"
12,420	"	"	"
13,500	"	"	"

are included in these averages, but have to be ruthlessly pulled down to a herd level in presenting a summary of this nature. Their real prominence is completely obscured in any average results, whether of the herd to which they belong, or the group of herds in the association, or the totals of associations in the province. The major portion of their beauty and distinctiveness is entirely dissipated in increasing by just a mere fraction the yields of herds that average only 5,000 pounds of milk and 173 pounds of fat, or 4,500 pounds of milk and 161 pounds of fat.

When it is definitely established that individual cows possessing the capacity of producing these heavy yields are found in increasing numbers in various parts of the Dominion, is it not high time for our ordinary factory patrons to commence and to persevere in cow testing so that our general standard of production may be quickly raised?



SESSIONAL PAPER No. 15a

TABLE II.—Comparisons between Herds in the Province of Ontario, for the Full Period of Lactation, 1910, Weights Only.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Avonbank.....	A	8	54,529	6,816
Belmont.....	A	1	7,941	7,941
Black Creek.....	A	4	19,930	4,982
Cleland.....	A	10	37,236	3,723
Corinth.....	A	8	55,806	6,975
Culloden.....	A	33	230,960	6,999
Glanworth.....	A	15	95,900	6,393
".....	B	18	111,665	6,163
".....	C	5	31,483	6,296
Harrietsville.....	A	6	59,466	9,911
".....	B	2	8,869	4,434
Keene.....	A	2	13,740	6,870
Mapleton.....	A	5	24,754	4,950
".....	B	6	44,722	7,453
".....	C	2	9,708	4,854
North Oxford.....	A	10	74,792	7,479
".....	B	5	42,972	8,594
".....	C	5	35,487	7,097
".....	D	7	36,103	5,157
".....	E	8	57,520	7,190
".....	F	14	71,623	5,116
Reabero.....	A	5	25,045	5,009
South Lanark.....	A	9	41,948	4,661
".....	B	9	48,343	5,371
".....	C	7	27,271	3,895
".....	D	10	52,840	5,284
".....	E	16	97,917	6,119
".....	F	1	4,980	4,980
".....	G	17	108,107	6,364
".....	H	4	20,330	5,082
Spencerville.....	A	9	38,881	4,320
Springford.....	A	15	98,662	6,577
St. Mary's.....	A	9	64,723	7,191
Vernon.....	A	16	86,224	5,389
Verschoyle.....	A	16	97,736	6,108
".....	B	12	59,101	4,925
".....	C	15	88,210	5,880

The average yield of the 344 cows in this table is 6,056 pounds of milk.

The variation in yield is from 3,723 pounds per cow in the Cleland Association, up to 9,911 pounds in Herd A, Harrietsville.

The *five cows* in herd B, North Oxford, give over 4,000 pounds of milk *more than the nine cows* at Spencerville.

What a conservation of human energy on our farms there would be if better cows were kept.



TABLE III.—Comparisons between Individual Herds in the Province of Ontario for the Full Period of Lactation, 1910, Weights Only.

	Herd No.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER Cow.
			Milk	Milk.
			Lbs.	Lbs.
Individual. ....	1	7	35,938	5,154
" .....	2	4	17,038	4,259
" .....	3	10	67,125	6,712
" .....	4	3	15,481	5,160
" .....	5	4	25,019	6,254
" .....	6	3	18,208	6,069
" .....	7	2	9,454	4,727
" .....	8	4	38,105	9,526
" .....	9	2	14,271	7,135
" .....	10	12	61,901	5,158
" .....	11	11	59,018	5,365
" .....	12	3	15,922	5,307
" .....	13	6	38,361	6,393
" .....	14	18	152,047	8,447
" .....	15	18	130,777	7,265
" .....	16	17	97,195	5,717
" .....	17	17	96,523	5,677
" .....	18	3	14,259	4,753
" .....	19	7	53,420	7,631

The average yield of the 151 cows in this table is 6,424 pounds of milk.

In herd No. 14 are three individual records of over 10,200 pounds of milk, the lowest yield in the herd is 6,160 pounds. The average yield of 8,447 pounds for the 18 cows is noteworthy.

The average of herd No. 10 is materially lowered by two yields of 3,940 and 2,498 pounds of milk (the ages of the two cows have not been given by the owner), there are yields of 6,460 and 7,380 among the 12 cows.

With the great majority of cows whose records are received, the full period of lactation falls within the calendar year. Some, however, are milking perhaps for five or six months in one year and four or five in the next year; such records, as well as those of several farrow cows that have been milking more than one year, are included in the tables of twelve months' production.

Many herds appear with only a small number of cows on account of this division.



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TABLE IV.—Comparisons between Herds in the Province of Ontario for Twelve Months' Production, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Avonbank.....	A	1	4,250	161.1	4,250	3.7	161.1
".....	B	2	10,618	401.1	5,309	3.7	200.8
Benverton.....	A	5	29,042	1,148.3	5,808	3.9	229.6
Bertie.....	A	2	12,670	439.2	6,335	3.4	219.6
".....	B	4	31,693	1,151.6	7,773	3.7	287.9
".....	C	3	16,081	571.8	5,369	3.5	190.6
".....	D	1	7,259	215.9	7,250	2.9	215.9
".....	E	3	15,649	684.9	5,213	4.3	228.3
".....	F	2	10,610	379.0	5,305	3.5	189.5
".....	G	2	15,425	518.4	7,712	3.3	259.2
".....	H	4	24,423	881.6	6,105	3.6	221.1
".....	I	3	15,159	631.0	5,059	4.1	210.3
".....	J	3	12,535	756.4	6,511	3.9	252.1
".....	K	4	22,542	798.6	5,635	3.5	199.6
".....	L	4	35,032	1,476.5	8,758	4.2	369.1
".....	M	8	45,531	1,686.1	5,681	3.7	210.7
Black Creek.....	A	6	46,397	1,576.9	7,732	3.3	262.8
".....	B	3	20,218	774.1	6,739	3.8	285.0
".....	C	3	35,330	1,127.4	11,777	3.1	375.8
".....	D	7	54,530	1,783.1	7,790	3.2	254.7
".....	E	6	38,597	1,540.1	6,433	4.0	256.6
".....	F	2	22,968	736.2	11,484	3.2	368.1
Brooksdale.....	A	13	87,730	3,227.9	6,748	3.6	248.3
".....	B	2	17,140	615.0	8,750	3.6	307.5
".....	C	3	25,739	872.9	8,579	3.6	290.9
Brooklin.....	A	3	16,123	556.4	5,374	3.4	185.4
".....	B	7	45,528	1,533.0	6,504	3.3	219.0
Burgessville.....	A	2	18,280	554.0	9,140	3.0	227.0
".....	B	1	6,145	244.3	6,145	4.0	244.3
".....	C	1	9,444	288.4	9,444	3.2	288.4
".....	D	1	8,355	253.3	8,355	3.0	253.3
Camlachie.....	A	5	35,581	1,063.8	6,116	3.4	212.7
".....	B	4	18,811	718.2	4,702	3.8	179.5
".....	C	2	8,479	290.0	4,239	3.4	145.0
Cassel.....	A	5	22,940	1,087.2	5,988	3.6	217.4
".....	B	2	12,080	499.7	6,040	4.1	249.8
".....	C	3	23,062	882.9	7,687	3.8	294.3
".....	D	2	17,438	607.9	8,719	3.5	303.9
".....	E	3	24,115	869.0	8,038	3.6	289.6
".....	F	1	7,460	289.1	7,460	3.8	289.1
Central Smith.....	A	6	54,910	1,822.3	9,151	3.3	303.7
Dalmeny.....	A	9	55,301	2,132.7	6,144	3.8	236.9
East and West Oxford.....	A	3	38,455	1,122.8	12,818	2.9	377.6
".....	B	11	107,575	3,645.5	9,779	3.4	331.4
Elna.....	A	1	6,320	229.1	6,320	3.6	229.1
".....	B	2	14,381	475.2	7,190	3.3	239.6
".....	C	2	9,680	490.4	4,840	4.1	200.2
".....	D	1	5,925	221.8	5,925	3.8	224.8
".....	E	2	15,794	526.8	7,897	3.3	263.4
German Union.....	A	2	13,530	467.1	6,765	3.4	233.5
".....	B	8	52,391	2,006.4	6,549	3.8	250.8
Hickson.....	A	6	48,568	1,645.8	8,091	3.4	274.3
Innerkip.....	A	13	107,237	3,560.9	8,249	3.4	273.7
".....	B	7	56,460	1,848.7	8,065	3.2	264.1
".....	C	3	35,105	1,121.4	11,701	3.1	373.8
Keene.....	A	2	15,373	530.6	7,686	3.4	265.3
".....	B	3	24,415	849.7	8,138	3.4	283.2
Kerwood.....	A	6	41,920	1,595.4	6,986	3.8	265.9
Kintore.....	A	4	34,986	1,034.9	8,746	2.9	258.7
Lorneville.....	A	4	19,590	680.1	4,896	3.4	170.0
".....	B	4	18,940	660.5	4,735	3.5	165.1



TABLE IV.—Comparisons between Herds in the Province of Ontario for Twelve Months' Production, 1910—*Continued.*

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER Cow.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Maple Grove.....	A	2	9,790	374.6	4,895	3.8	187.3
Milton.....	A	5	52,141	1,725.7	10,428	3.3	345.1
".....	B	6	35,295	1,313.5	5,882	3.7	218.9
".....	C	9	80,660	2,833.7	8,962	3.5	314.8
Morewood.....	A	11	82,593	3,092.9	7,508	3.7	281.1
Peterboro.....	A	1	7,970	234.1	7,9.0	3.0	234.1
Rockford.....	A	3	25,820	784.0	8,606	3.0	261.3
Shearer.....	A	2	11,996	395.6	5,998	3.3	197.8
".....	B	1	9,935	297.5	9,935	3.0	297.5
Spring Creek.....	A	2	19,530	719.9	9,765	3.7	359.9
".....	B	8	63,902	2,132.1	7,987	3.3	266.5
".....	C	1	9,010	338.0	9,010	3.7	338.0
".....	D	11	112,296	3,431.5	10,209	3.0	311.9
".....	E	9	87,584	2,878.2	9,731	3.2	319.8
".....	F	9	74,180	2,395.1	8,282	3.2	266.1
".....	G	5	39,232	1,252.5	7,646	3.2	250.5
".....	H	1	11,840	419.8	11,840	3.5	419.8
".....	I	1	8,750	296.5	8,750	3.3	296.5
Star.....	A	2	15,701	474.0	7,852	3.0	237.0
St. George.....	A	5	42,830	1,667.3	8,566	3.8	333.4
".....	B	16	100,950	3,293.9	6,309	3.2	205.8
".....	C	3	21,464	787.7	7,154	3.6	262.5
".....	D	9	80,943	2,532.7	8,993	3.1	286.9
".....	E	10	42,935	1,554.9	4,293	3.6	155.4
".....	F	6	38,665	1,309.1	6,442	3.4	218.2
".....	G	4	23,580	850.2	5,895	3.6	212.5
".....	H	4	21,400	822.1	5,350	3.8	205.5
St. Mary's.....	A	6	38,232	1,264.6	6,372	3.3	210.7
".....	B	2	11,995	502.3	5,997	4.2	251.1
Thedford.....	A	2	12,666	425.4	6,333	3.4	217.7
".....	B	4	33,945	980.2	8,486	2.9	245.0
Trewern.....	A	1	10,260	305.8	10,260	2.9	305.8
Wallace.....	A	4	31,272	1,010.6	7,818	3.2	252.6
".....	B	1	5,799	201.2	5,799	3.4	201.2

The average yield of the 403 cows in this table is 7,417 pounds of milk, 3.4 test and 256 pounds of fat.

In herd B, Bertie, the average of four cows works out at 7,773 pounds of milk and 287 pounds of fat; but the yield of one cow is as high as 10,268 pounds of milk and 383 pounds of fat, while another of the four gives only 5,010 pounds of milk and 195 pounds of fat. This is a telling example of what 'averages' generally do, they reduce high and low yields to one dead level. Cow testing aims at and accomplishes giving full credit where credit is due; it makes each cow responsible for an adequate return, and detects those that refuse to do an honest season's work.

The individual yields in this table vary between 4,435 pounds of milk and 160 pounds of fat from cows 5, 8 and 11 years old, up to a total production of 14,430 pounds of milk and 439 pounds of fat.

One most encouraging feature of this table is the fact that in 16 different herds are found cows giving over 360 pounds of butter fat.

A good record is found in herd B, East and West Oxford, cows with an average of 9,779 pounds of milk and 331 pounds of fat.

Herd D. Spring Creek, has topped the ten thousand pour k with 11 cows.





FIG. 1.

Two Grade Ayrshires, St. Prosper, Que. Cow Testing Association, 1910.  
Right: age 7, yield 7,697 lb. milk, 4.0 test, 314 lb. fat. Left: age 5, yield 6,718 lb. milk, 3.9 test, 267 lb. fat.



FIG. 2.

Two Grade Shorthorns, St. Edwidge, Que. Cow Testing Association, 1910.  
Right: age 13, yield 0 lb. milk, 3.7 test, 276 lb. fat. Left: age 8, yield 6,835 lb. milk, 3.8 test, 260 lb. fat









FIG. 1.—Ayrshire, St. Armand, Que. Cow Testing Association, 1910.  
Age 12, yield 7,707 lb. milk, 3·8 test, 293 lb. fat.

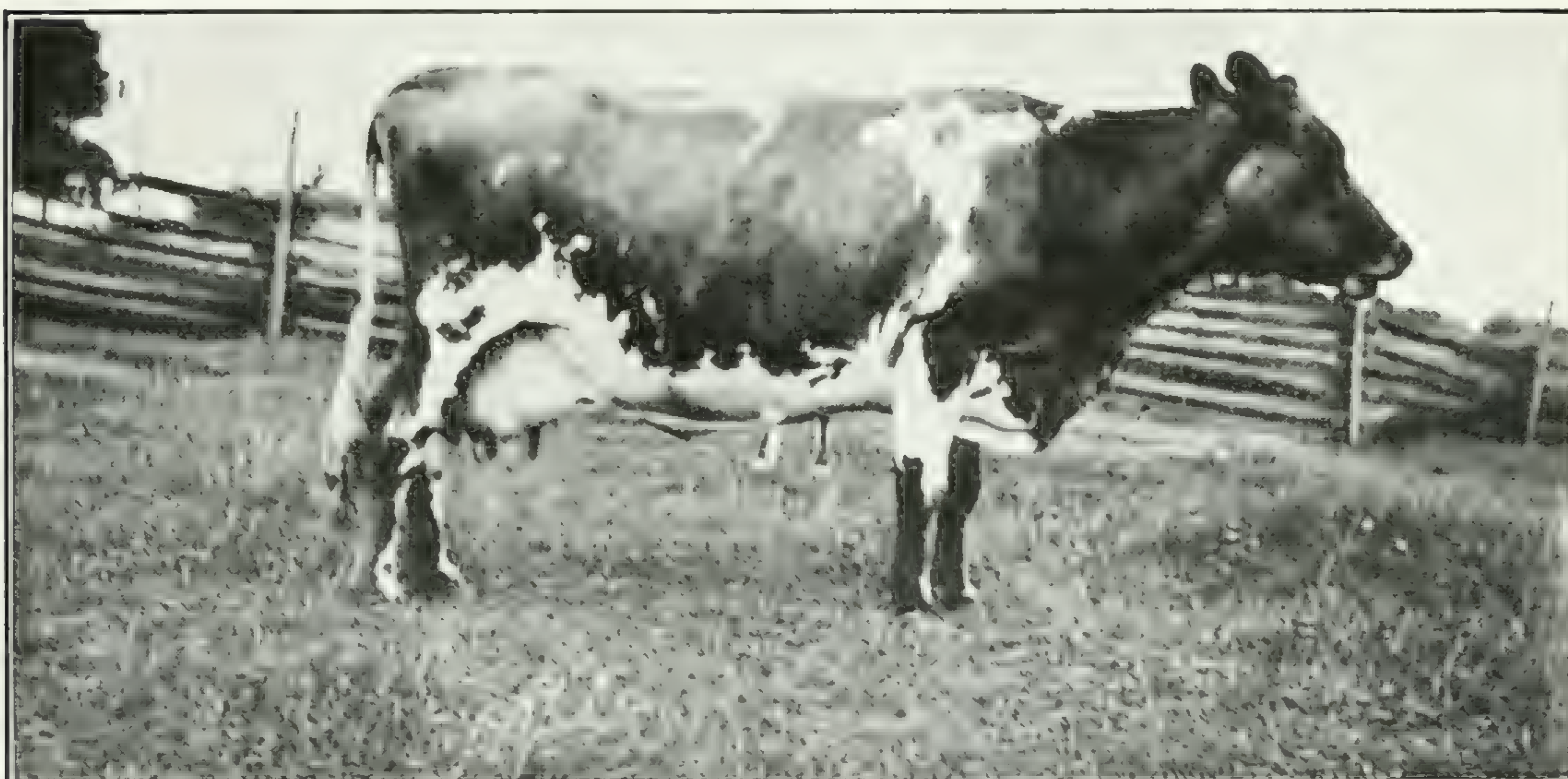


FIG. 2.—Grade Jersey, Cowansville, Que. Cow Testing Association, 1910.  
Age 12, yield 9,690 lb. milk, 4·8 test, 472 lb. fat.



FIG. 3.—French Canadian, St. Prosper, Que. Cow Testing Association, 1910.  
Age 8, yield 7,797 lb. milk, 3·9 test, 302 lb. fat.







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TABLE V.—Comparisons between Herds in the Province of Ontario, for Twelve Months' Production, 1910, Weights Only.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Avonbank.....	A	1	7,036	7,036
Belmont.....	A	7	70,536	10,077
Black Creek.....	A	9	60,103	6,677
Corinth.....	A	1	10,570	10,570
Culloden.....	A	25	232,045	9,280
Mapleton.....	A	1	9,020	9,020
".....	B	1	7,520	7,520
".....	C	11	97,222	8,838
North Oxford.....	A	7	42,690	6,099
".....	B	2	14,181	7,090
".....	C	1	8,670	8,670
".....	D	8	78,451	9,806
".....	E	6	44,740	7,456
".....	F	5	47,886	9,577
".....	G	7	42,690	6,099
".....	H	1	8,690	8,690
".....	I	8	78,451	9,806
".....	J	6	44,740	7,456
".....	K	5	47,886	9,577
South Lanark.....	A	7	50,149	7,164

The average yield of the 119 cows in this table is 8,430 pounds of milk.

Several individual yields of 10,000, 11,000 and over 12,000 pounds of milk are included, as well as some yields of under 5,000 pounds.

TABLE VI.—Comparisons between Individual Herds in the Province of Ontario for Twelve Months' Production, 1910. Weights Only.

	Herd No.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk	Milk.
			Lbs.	Lbs.
Individual.....	20	8	38,410	4,801
".....	21	4	18,401	4,600
".....	22	8	65,736	8,217
".....	23	10	84,358	8,435
".....	24	9	51,916	5,747
".....	25	7	62,816	8,973
".....	26	2	11,033	5,516
".....	27	3	19,105	6,368
".....	28	3	31,950	10,650
".....	29	2	15,565	7,782
".....	30	10	73,187	7,318
".....	31	14	109,815	7,843
".....	32	10	55,769	5,576
".....	33	13	72,709	5,593

The average yield of the 103 cows in this table is 6,900 pounds of milk.  
Six individual yields of over 10,000 pounds are included.



The lowest yield is in herd No. 20, a cow with 3,774 pounds of milk.

The next lowest yield is in herd No. 30 where one cow, seven years old, gives only 3,868 pounds of milk; the highest individual yield of all the 103 cows is also in this herd, 11,869 pounds. *A difference of 8,000 pounds of milk* between the yield of two cows in the same herd is startling.

In herd No. 23 each cow gives over 6,300 pounds of milk.

Supposing the owner of the herd No. 23 kept 100 cows, the owner of herd No. 20, if he wished to obtain as much milk, *would have to keep 175 cows.*

Herd No. 30 includes one cow giving 12,860 pounds of milk.

The variation in herd No. 31 is from 2,334 pounds of milk up to 8,412 pounds.

TABLE VII.—Comparisons between Herds in the Province of Quebec for the Full Period of Lactation, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Adamsville.. . . .	A	4	17,533	693·3	4,482	3·8	174·5
" . . . . .	B	2	7,228	292·5	3,614	4·0	146·2
" . . . . .	C	14	64,588	2,380·1	4,611	3·7	170·0
" . . . . .	D	1	3,520	138·6	3,520	3·9	138·6
Belford.....	A	3	9,909	387·9	3,303	3·9	129·9
" . . . . .	B	12	69,105	2,146·8	5,008	3·5	178·9
Belœil . . . . .	A	9	48,874	1,853·7	5,430	3·8	205·9
" . . . . .	B	5	28,409	1,086·1	5,681	3·8	217·2
" . . . . .	C	10	45,970	1,823·7	4,597	3·9	182·3
" . . . . .	D	6	37,230	1,434·9	6,205	3·8	239·1
" . . . . .	E	5	18,880	704·2	3,776	3·7	140·8
" . . . . .	F	5	23,523	913·6	4,704	3·8	182·7
" . . . . .	G	5	18,136	753·0	3,627	4·1	150·6
" . . . . .	H	1	6,065	228·5	6,065	3·7	228·5
Cap St. Gabriel . . . . .	A	11	53,442	2,239·5	4,858	4·2	203·5
" . . . . .	B	6	36,183	1,434·8	6,030	3·9	239·1
" . . . . .	C	9	37,703	1,548·3	4,189	4·1	172·0
" . . . . .	D	9	37,900	1,543·1	4,211	4·0	171·4
" . . . . .	E	6	30,670	1,306·2	5,111	4·0	217·7
" . . . . .	F	6	17,061	738·0	2,843	4·3	123·0
" . . . . .	G	4	15,956	646·1	3,989	4·0	161·5
" . . . . .	H	5	26,130	1,028·2	5,226	3·9	205·6
" . . . . .	I	10	45,424	1,877·9	4,542	4·1	187·7
" . . . . .	J	4	16,682	725·5	4,170	4·3	181·4
" . . . . .	K	5	22,940	908·5	4,588	3·9	181·7
Coaticook.....	A	3	18,423	663·8	6,141	3·6	221·2
" . . . . .	B	2	7304	280·2	3,652	3·9	140·1
Compton.....	A	10	34,825	1,236·7	3,482	3·5	123·6
" . . . . .	B	20	77,324	2,606·7	3,866	3·3	130·3
" . . . . .	C	6	30,671	1,120·4	5,111	3·6	186·7
" . . . . .	D	7	36,674	1,368·4	5,239	3·7	195·4
Clarenceville.....	A	4	19,752	668·7	4,938	3·3	164·1
Cowansville. . . . .	A	3	20,790	1,005·6	6,930	4·8	335·2
" . . . . .	B	12	72,150	2,747·8	6,012	3·8	229·1
" . . . . .	C	1	5,110	215·6	5,110	4·2	215·6
" . . . . .	D	16	64,620	2,703·3	4,038	4·1	168·9
" . . . . .	E	12	60,480	2,329·9	5,040	3·8	194·1
" . . . . .	F	5	22,194	965·2	4,438	4·3	193·0
" . . . . .	G	12	61,140	2,406·7	5,094	3·9	200·5
Dairy Valley.....	A	5	33,038	1,013·4	6,607	3·0	202·6
" . . . . .	B	18	74,059	2,529·1	4,114	3·5	146·0
" . . . . .	C	2	6,675	291·7	3,337	4·0	145·8
" . . . . .	D	9	29,820	1,140·2	3,303	3·8	126·6
" . . . . .	E	4	17,109	643·8	4,277	3·7	160·9



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TABLE VII.—Comparisons between Herds in the Province of Quebec for the Full Period of Lactation, 1910—*Continued.*

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Dixville.....	A	11	41,571	1,569.1	3,779	3.7	142.6
".....	B	8	32,297	1,429.0	4,162	4.2	178.6
".....	C	12	40,240	1,702.8	3,354	4.2	141.9
".....	D	5	23,013	1,026.0	4,692	4.4	205.2
".....	E	4	14,153	549.0	3,537	3.8	137.2
Dunham.....	A	6	21,497	1,026.9	4,082	4.1	171.1
Fitch Bay.....	A	8	36,079	1,300.8	4,509	3.6	162.6
".....	B	8	36,674	1,304.9	4,584	3.5	163.1
Foster.....	A	12	51,347	2,264.1	4,528	4.1	188.6
".....	B	7	32,595	1,489.5	4,656	4.5	212.7
".....	C	7	31,261	1,221.4	4,465	3.9	174.4
".....	D	10	37,675	1,504.4	3,767	4.0	150.4
Frelighsburg.....	A	12	55,295	2,325.1	4,607	4.2	193.9
".....	B	4	12,920	521.8	3,230	4.0	130.4
Griffin.....	A	9	39,796	1,531.3	4,421	3.8	170.1
".....	B	6	27,935	1,095.1	4,655	3.9	182.5
".....	C	6	21,465	875.8	3,577	4.0	145.9
".....	D	8	38,730	1,495.7	4,841	3.8	186.9
".....	E	9	33,970	1,315.0	3,774	3.8	146.1
Hatley Centre.....	A	9	37,025	1,357.6	4,113	3.4	150.8
Henryville.....	A	2	8,290	297.0	4,145	3.5	148.5
L'Assomption.....	A	3	15,117	591.1	5,039	3.9	197.0
".....	B	8	50,518	2,275.5	6,314	4.5	254.4
Marbleton.....	A	3	19,574	717.1	6,524	3.6	239.0
".....	B	4	19,890	678.2	4,972	3.4	169.5
Melboro.....	A	16	56,862	2,141.0	3,553	3.7	133.8
".....	B	5	19,456	722.5	3,891	3.7	144.5
".....	C	10	57,166	1,977.2	5,716	3.4	197.7
Martinville.....	A	2	8,038	278.7	4,019	3.4	139.3
".....	B	9	33,377	1,321.1	3,708	3.9	146.7
".....	C	6	27,648	965.5	4,608	3.4	160.9
".....	D	7	27,080	1,036.3	3,868	3.8	148.0
".....	E	6	21,444	782.6	3,574	3.6	130.4
North Hatley.....	A	10	45,119	1,682.2	4,511	3.7	168.2
".....	B	4	23,180	954.8	5,792	4.1	238.7
".....	C	3	16,592	617.0	5,500	3.7	205.6
Notre Dame de Stanb.....	A	9	47,433	1,686.9	5,270	3.5	187.4
".....	B	11	58,351	2,329.2	5,304	3.9	211.7
".....	C	5	21,203	780.2	4,240	3.6	156.0
Ormstown.....	A	6	30,180	1,315.1	5,030	4.3	219.1
Point du Jour.....	A	7	34,244	1,369.1	4,892	3.9	195.5
".....	B	3	12,540	452.7	4,180	3.6	150.9
".....	C	4	20,276	802.2	5,669	3.9	200.5
".....	D	3	14,978	635.8	4,992	4.4	211.9
".....	E	3	14,618	577.9	4,872	3.9	192.6
Richmond and Melbourne.....	A	2	10,145	378.6	5,072	3.7	189.3
".....	B	6	28,708	1,033.3	4,784	3.6	172.2
".....	C	6	35,468	1,385.8	5,911	3.9	230.9
St. André Avellin.....	A	4	18,174	869.6	4,543	4.8	217.4
".....	B	4	17,832	717.7	4,457	4.0	179.4
St. Armand.....	A	12	51,157	2,438.2	4,263	5.0	203.1
".....	B	11	62,848	2,187.5	5,713	3.4	198.8
".....	C	23	113,914	4,527.8	4,952	3.9	196.8
".....	D	5	28,293	1,083.5	5,676	3.8	216.7
St. Clet.....	A	8	39,910	1,581.2	4,988	3.9	197.6
".....	B	4	24,270	946.4	6,067	3.9	236.6
St. Camille.....	A	3	17,375	735.2	5,791	4.3	245.0
".....	B	10	41,955	1,762.1	4,195	4.3	176.2
".....	C	4	17,340	766.6	4,335	4.4	191.6
".....	D	2	34,235	1,418.2	5,705	4.2	241.3
".....	E	7	29,649	1,170.7	4,235	3.9	167.2
".....	F	3	20,059	849.3	6,696	4.2	283.1



TABLE VII.—Comparisons between Herds in the Province of Quebec for the Full Period of Lactation, 1910—*Concluded.*

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.		Milk.
			Lbs.	Lbs.	Lbs.	Test.	Lbs.
Ste. Emilie de Lotbiniere.....	A	6	26,484	1,038.5	4,414	3.9	173.0
" .....	B	5	19,190	825.6	3,838	4.3	165.1
" .....	C	6	24,038	975.5	4,006	4.0	164.5
" .....	D	6	21,728	902.6	3,621	4.1	159.4
" .....	E	1	6,828	286.1	6,828	4.1	284.1
" .....	F	8	37,766	1,426.3	4,720	3.7	178.2
" .....	G	4	19,510	759.0	4,877	3.8	180.5
" .....	H	9	37,040	1,494.9	4,115	4.0	166.1
" .....	I	2	11,400	523.1	5,745	4.5	261.5
" .....	J	8	35,534	1,509.6	4,441	4.2	184.7
" .....	K	2	8,370	378.8	4,185	4.5	189.4
" .....	L	4	17,644	752.8	4,411	4.2	188.2
" .....	M	6	23,340	1,001.2	3,890	3.5	163.8
" .....	N	6	27,476	1,173.2	4,579	4.2	195.5
" .....	O	9	41,560	1,683.9	4,617	4.0	187.1
" .....	P	1	4,472	189.6	4,472	4.2	180.6
Ste. Edwidge.....	A	13	81,573	3,010.3	6,274	3.6	231.5
Ste. Genevieve de Beloeil.....	A	10	40,850	1,825.8	4,035	4.4	182.5
" .....	B	14	69,889	2,445.5	4,992	3.4	174.6
" .....	C	10	53,385	2,022.4	5,338	3.8	202.2
" .....	D	5	19,334	815.5	3,866	4.2	163.1
St. Hermenegille.....	A	14	51,650	2,046.2	3,689	3.9	146.1
" .....	B	8	36,210	1,335.7	4,526	3.6	166.9
" .....	C	4	15,526	620.6	3,881	3.9	155.1
" .....	D	6	25,580	1,036.4	4,263	4.0	172.7
" .....	E	8	27,290	1,059.4	3,411	3.8	132.4
" .....	F	2	11,729	598.0	5,864	4.3	254.0
" .....	G	6	29,290	1,079.1	4,881	3.6	179.8
" .....	H	10	40,355	1,646.9	4,035	4.0	164.6
" .....	I	5	19,527	749.9	3,905	3.8	149.9
St. Hyacinthe.....	A	18	94,838	3,607.1	5,268	3.8	200.3
" .....	B	8	46,415	1,775.9	5,801	3.8	221.9
" .....	C	13	65,295	2,822.2	5,022	4.3	217.9
" .....	D	8	45,907	1,916.7	5,738	4.1	239.5
St. Prosper.....	A	7	46,920	1,950.9	6,702	4.1	278.7
" .....	B	4	21,866	918.6	5,466	4.2	229.6
St. Thomas d'Aspin.....	A	18	82,291	3,312.8	4,571	4.0	184.0
" .....	B	5	25,436	1,064.0	5,087	4.1	212.8
" .....	C	8	37,221	1,451.2	4,652	3.9	181.4
" .....	D	3	13,604	543.6	4,534	4.0	181.2
West Shefford.....	A	24	89,974	3,418.7	3,748	4.6	172.4
" .....	B	9	30,139	1,108.6	3,349	3.6	123.1
" .....	C	11	45,841	1,724.1	4,167	3.7	156.7
" .....	D	26	104,190	3,829.5	4,007	4.2	170.3
" .....	E	13	51,849	1,944.5	3,988	3.7	146.5
" .....	F	11	33,570	1,303.2	3,051	3.8	118.4
" .....	G	1	4,152	190.3	4,152	4.6	190.3
" .....	H	22	80,271	2,959.7	3,648	3.6	134.5

The average yield of the 1,139 cows in this table is 4,560 pounds of milk, 3.9 test, 179.2 pounds of fat.

Between an average yield of 118.4 pounds of fat per cow in herd F, West Shefford, and 284 pounds of fat in herd C, Henryville, there is a great gulf.

One of the best individual records is that of a cow in herd A, St. Prosper, giving 8,769 pounds of milk, 350.3 pounds of fat. Four out of the seven cows in this herd give over 300 pounds of fat.



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In herd B, L'Assomption, 2 cows are credited with 375 pounds of fat each: the herd average is seriously affected by the yield of one cow being only 181 pounds of fat, *less than half*.

A herd in which there is but a slight difference in the yields between the best and the poorest cow is herd A, Ste. Emilie. The lowest yield is 152 pounds of fat and the highest is 186 pounds. In a large number of herds this difference is 90 pounds of fat, or about \$20 difference in the cash receipts.

In the herd of St. Edwidge, 11 out of the 13 cows give over 200 pounds of fat. In other herds not one out of the whole number of cows gives as much as 182 pounds of fat.

TABLE VIII.—Comparisons between Herds in the Province of Quebec for the Full Period of Lactation, 1910.

Name of Association.	Herd.	No. of Cows.	AVERAGE YIELD OF HERD.	BEST COW.	POOREST COW.
			Milk.	Milk.	Milk.
			Lbs.	Lbs.	Lbs.
Cap Santé.....	A	11	4,457	5,430	2,149
Foster.....	A	7	4,088	5,156	3,523
Ormstown.....	A	3	6,514	8,691	5,043
".....	B	3	5,226	5,843	4,641
Pointe du Lac.....	A	9	5,587	6,775	4,375
".....	B	6	4,733	6,551	3,990
Rigaud.....	A	8	5,651	8,301	3,622
Ruisseau St. George.....	A	9	7,461	9,375	5,978
Ste. Anne de la Pêrade.....	A	6	4,624	5,894	3,105
".....	B	9	4,091	4,782	3,232
".....	C	10	4,048	4,645	3,526
St. André Avellin.....	A	4	4,543	5,612	2,916
St. Hyacinthe.....	A	8	4,644	5,048	3,956
St. Liboire.....	A	7	5,288	6,509	3,735
".....	B	8	4,863	6,328	2,908
St. Louis de Gonzague.....	A	5	8,638	9,989	5,700
".....	B	5	4,439	6,262	3,386
".....	C	11	6,135	7,545	4,485
St. Rémi de Tingwick.....	A	6	4,080	4,358	3,840
".....	B	7	3,526	4,280	2,320
".....	C	11	3,688	4,438	3,116
".....	D	12	4,043	4,990	2,760
".....	E	10	3,293	3,840	2,620
St. Charles, River Richelieu.....	A	8	5,563	8,160	3,355
Upton.....	A	11	4,836	6,090	3,868
Warwick.....	A	10	3,245	4,800	2,510
".....	B	12	3,696	4,307	2,578
".....	C	9	4,592	5,230	3,245
".....	D	6	4,059	4,782	3,664
".....	E	9	4,005	4,710	3,353
Total number of cows and average yield.....		240	4,667	5,954	3,584

In this table the average yield of the 240 cows is 4,667 pounds of milk.

Had the 10 cows in herd A, Warwick, produced only just as much as the average of all the 240 cows, with milk at \$1 per hundred, they would have brought in more cash for their owner to the extent of \$142.20; if as good as the average of the best cows, they would have earned \$270.90 more than they did; if as good as the average of herd A, St. Louis, they would have brought in an extra \$539.30.



An excellent opportunity is here afforded by the 30 herds in the table of studying at close range what an ordinary 'average' of yields may include.

It is desired to point out how manifestly unfair to both good and poor cows a cold arithmetical herd average may be; for a good cow's record is lowered out of all proportion to her real earning capacity, while a poor cow's record is brought right up far above her actual value as a milker.

Three herds may serve as examples. In herd A, St. Louis de Gonzague, the best cow gives 9,989 pounds of milk, and the poorest, a grade cow 10 years old, gives only 5,700 pounds, a *difference* of 4,289 pounds of milk; in herd A, Rigaud, the *difference* is 4,679 pounds; in herd A, St. Charles, the *difference* is 4,805 pounds of milk. Thus at Rigaud, if the average yield of the herd, alone, is considered, the best cow suffers to the extent of 2,650 pounds of milk; and, on the contrary, the poorest cow at St. Louis de Gonzague gets an extra weight of 2,938 pounds of milk placed to her credit.

The palpable and most reasonable deduction is that *each separate cow must be rated according to her particular individual ability* as a producer. This is one prime object of cow testing.

The average of the best cows is seriously reduced by five low yields of from 3,840 to 4,358 pounds of milk. The poorest cow in herd C, St. Louis de Gonzague, is better than these five 'best' cows.

The very fact that one or two of the lowest yields are from two and three-year-olds, dry in eight months, emphasizes the need of good breeding, training to a longer first milking period, and better conditions generally, so as to give the young stock a first-class start off in their life work of milk production.

While the average yield of the 30 herds is 4,667 pounds of milk per cow, the average of the best cow in each herd mounts up to 5,954 pounds; and the average of the poorest cow in each herd drops to 3,584 pounds: thus, even considering all the herds totalled together, *there is an average difference of 2,370 pounds of milk between the best and the poorest cow in each herd*; while as pointed out above, this difference actually runs as high as 4,805 pounds of milk.

It is surely apparent, right on the surface of things, what an enormous field of action this opens, for unless the individual yields are noted carefully, the owner of any other herd of eight cows might say: 'My cows average \$55.63 each in the value of milk produced,' and he would remain content with the knowledge of the total or average cash receipts. But the dairyman who takes up cow testing detects immediately that while the average income per cow is \$55.63, one cow brings in actually \$48.05 more than another right alongside her in the stable. Then, and then only, can follow intelligent selection of the profitable cows.

TABLE IX.—Contrasts between Average Yields of Herds in the Province of Quebec.

SOME POOR AVERAGES.					SOME GOOD AVERAGES.				
Association.	No. of Cows	Average Yield per Cow.			Association.	No. of Cows	Average Yield per Cow.		
		Milk.	Test.	Fat.			Milk.	Test.	Fat.
		Lbs.		Lbs.			Lbs.		Lbs.
Cap St. Gabriel.....	6	2,843	4 3	123 0	Beloeil.....	6	6,205	3 8	239 1
Compton.....	10	3,482	3 5	123 6	Cowansville.....	12	6,012	3 8	229 1
Freighsburg.....	4	3,230	4 0	130 4	Henryville.....	8	6,314	4 5	284 4
Ste. Emelie.....	6	4,006	4 0	162 5	Richmond.....	6	5,911	3 9	230 9
St. Hermenegilde...	8	3,411	3 8	132 4	Ste. Edwidge....	13	6,274	3 6	231 5
West Shefford.....	11	3,051	3 8	118 4	St. Prosper.....	7	6,702	4 1	278 7



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From Table VII, on the preceding pages, the above herds have been picked out and rearranged as affording striking examples of the variations in yields obtained in different herds.

The *average difference* in yield between these contrasted herds is *2,900 pounds of milk* per cow.

Some of the individual cows comprised in the above poor averages gave a bare 110 pounds of butter-fat during the full period of lactation. Can such cows possibly be worth keeping?

On the other hand, hundreds of cows have over 250 pounds of butter fat to their credit. Cow testing is an immediate indication of which to use as foundation stock for building up a profitable herd.

The herd of six cows at Belœil gave a total yield of *20,169 pounds of milk* more than the herd of six cows at Cap St. Gabriel. If milk is valued at \$1 per 100 pounds, the Belœil cows each earned *\$33.60 more per year* for their fortunate owner.

TABLE X.—Comparisons between Individual Herds in the Province of Quebec for the Full Period of Lactation, 1910. Weights Only.

	Herd No.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Individual .....	34	2	15,185	7,592
" .....	35	8	38,592	4,824
" .....	36	10	56,138	5,613
" .....	37	6	23,695	3,949

The average yield of the 26 cows in this table is 5,138 pounds of milk.  
The individual yields vary from 2,770 pounds up to 7,894 pounds.



TABLE XI.—Comparisons between Herds in the Province of Quebec for Twelve Months' Production, 1910.

Name of Association.	Herd.	No. of Cows	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Adamsville.....	A	1	3,100	160.2	3,100	5.0	160.2
".....	B	2	11,377	438.2	5,688	3.3	219.1
Clarenceville..	A	3	20,692	736.6	6,897	3.5	245.5
Cowansville.....	A	12	78,364	2,865.5	6,208	3.6	220.4
".....	B	15	100,461	5,005.0	6,697	4.9	333.6
".....	C	13	73,960	2,986.0	5,689	4.0	221.6
".....	D	14	94,948	3,839.4	6,782	4.0	273.5
".....	E	11	49,010	2,212.8	4,455	4.0	201.1
Compton.....	A	9	49,418	2,039.4	5,490	4.1	226.6
".....	B	13	64,428	2,411.5	4,956	3.8	190.8
Dairy Valley.....	A	7	51,443	1,767.0	7,777	3.2	252.4
".....	B	4	16,000	644.9	4,000	4.0	161.2
Foster.....	A	6	31,221	1,415.5	5,203	4.5	235.9
Frelighsburg.....	A	8	41,683	1,741.9	5,210	4.1	217.7
North Hatley.....	A	3	19,349	777.2	6,447	4.0	259.0
Richmond and Melbourne.....	A	15	100,728	3,845.6	6,715	3.8	256.3
".....	B	5	31,322	1,224.6	6,260	3.9	244.9
".....	C	3	23,183	811.4	7,727	3.5	270.4
Ormstown.....	A	7	53,602	2,223.5	7,457	4.2	317.6
St. Armand.....	A	8	36,211	1,712.9	4,526	4.8	214.1
".....	B	3	18,532	715.8	6,177	3.8	233.6
".....	C	19	117,448	4,373.7	6,234	3.6	230.1
".....	D	4	25,755	961.5	6,438	3.7	240.3
".....	E	12	83,303	3,339.2	6,942	4.0	287.2
Ste. Emilie.....	A	2	7,712	331.6	3,856	4.3	165.8
St. Hyacinthe.....	A	7	50,689	1,922.4	7,241	3.7	274.6
".....	B	1	7,765	307.1	7,765	3.9	307.1
St. Prosper.....	A	15	101,389	4,113.6	6,759	4.0	274.2
".....	B	3	13,491	581.3	4,497	4.3	197.1
".....	C	3	21,735	892.0	7,245	4.1	297.3

The average yield of the 229 cows in this table is 6,119 pounds of milk, 3.8 test, 237.8 pounds of fat.

The average of the four cows in herd B, Dairy Valley is a *little less than half* the average of the 15 cows in herd B, Cowansville. In this latter herd the lowest yield is 4,768 pounds of milk and 258 pounds of fat, while the highest yield is 9,690 pounds of milk and 472 pounds of fat.

A herd with a very even run of production is herd A, Dairy Valley. Each of the seven cows gives over 200 pounds of fat. In herd A, Richmond, with an average of 256 pounds of fat, the variation in yield is from 194 to 322 pounds of fat, *a difference of 128 pounds* between the poorest and the best cows.

A good yield is found at Ormstown, an average of 317.6 pounds of fat, with one cow as high as 10,953 pounds of milk and 383.9 pounds of fat.

Herd A, St. Prosper, is also well worthy of notice, attaining an average yield for 15 cows of 6,759 pounds of milk and 274.2 pounds of fat. The lowest yield in this herd is 5,915 pounds of milk and 241 pounds of fat and the highest is 8,325 pounds of milk and 342.2 pounds of fat. Each cow in this herd thus is seen to give a higher yield of fat than the general average yield of all the 229 cows in the table.



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TABLE XII.—Comparisons between Herds in the Province of Quebec for Twelve Months' Production, 1910. Weights Only.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Foster.....	A	5	17,864	3,572
Ormstown .....	A	12	80,926	6,743
" .....	B	12	74,607	6,217
St. Edouard de Napierville .....	A	13	85,328	6,563
St. Louis de Gonzague.....	A	6	62,087	10,347
St. Hyacinthe.....	A	6	32,847	5,474

The average yield of these 54 cows is 6,547 pounds of milk.

In Tables VIII and XII the excellent standing of herd A, at St. Louis de Gonzague with an average of 8,638 pounds of milk from five cows, and 10,347 pounds from six cows should be an inspiration to every dairyman in Quebec.

TABLE XIII.—Comparisons between Herds in the Province of Nova Scotia for the Full Period of Lactation, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Brookfield .....	A	4	22,165	886.8	5,541	4.0	221.7
" .....	B	3	11,310	477.1	3,770	4.0	159.0
Scotsburn.....	A	5	29,088	1,303.7	5,817	4.4	260.7
" .....	B	1	4,756	242.2	4,756	5.0	242.2
" .....	C	5	25,460	1,072.2	5,092	4.2	214.4
" .....	D	7	33,926	1,505.3	4,846	4.4	215.0
Tatamagouche.....	A	6	27,514	1,095.1	4,585	3.9	182.5
Wolfville.....	A	3	15,545	828.9	5,181	5.3	276.3
" .....	B	4	19,713	1,018.7	4,928	5.1	254.6

The average yield of these 38 cows is 4,986 pounds of milk, 4.4 test, 221.8 pounds of fat.

The best individual record in this group is 7,759 pounds of milk, 325.9 pounds of fat in herd A, Scotsburn.

Out of the 38 cows tabulated 23 give over 200 pounds of fat.



TABLE XIV.—Comparisons between Herds in the Province of Nova Scotia for Twelve Months' Production, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER Cow.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Brookfield .....	A	7	44,145	1,729·3	6,306	3·9	247·0
Scotsburn .....	A	6	36,250	1,821·9	6,041	5·0	303·6
Tatamagouche .....	A	6	36,187	1,791·4	6,031	4·9	298·5
" .....	B	7	33,645	1,591·8	4,806	4·7	227·4
Wolfville.....	A	5	25,352	1,150·4	5,070	4·5	230·0
Total number of cows and average yield .....		31	.....	.....	5,663	4·5	260·8

Out of these 31 cows, 10 have records of over 300 pounds of fat.

TABLE XV.—Comparisons between Herds in the Province of New Brunswick for the Full Period of Lactation, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER Cow.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Berwick.....	A	4	19,500	655·0	4,875	3·3	163·7
Penobsquis .....	A	11	50,200	2,057·8	4,563	4·1	187·0
" .....	B	3	14,852	597·5	4,950	4·0	199·1
" .....	C	4	15,115	756·2	3,778	5·0	189·0
" .....	D	6	33,417	1,395·8	5,569	4·1	232·6
" .....	E	4	20,265	963·7	5,066	4·7	240·9
Petitcodiac.....	A	4	22,428	781·9	5,607	3·4	195·4
" .....	B	2	8,202	403·2	4,101	4·9	201·6
" .....	C	2	9,505	468·6	4,752	4·9	234·3
" .....	D	5	26,620	932·8	5,344	3·5	186·5
Sussex.....	A	6	30,359	1,290·6	5,059	4·5	215·1
Welsford....	A	4	19,234	900·2	4,808	4·6	225·0
" .....	B	1	7,833	352·3	7,833	4·4	352·3

These 56 cows average 4,955 pounds of milk, 4·1 test, 206·3 pounds of fat.

Some low yields of under 170 pounds of fat pull the general average down considerably.

In herd D, Penobsquis, five of the six cows give over 230 pounds of fat.

In herd C, Petitcodiac, one cow gives 311 pounds of fat, the other only 157 pounds.

The cow in herd B, Welsford, is worth nothing.



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TABLE XVI.—Comparisons between Herds in the Province of New Brunswick for Twelve Months' Production, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Burwick.....	A	1	6,320	245·0	6,320	3·8	245·0
Penobsquis.....	A	11	50,315	2,433·1	4,574	4·8	221·1
".....	B	5	27,234	1,366·9	5,446	5·0	273·3
".....	C	7	35,495	1,926·6	5,213	5·2	275·2
".....	D	4	15,559	793·3	3,889	5·0	1·8·3
Petitcodiac.....	A	9	58,161	2,014·9	6,462	3·4	223·8
".....	B	4	25,144	893·5	6,286	3·5	223·3
".....	C	4	17,737	813·3	4,434	4·5	203·3
".....	D	7	41,728	1,562·5	5,961	3·7	223·2
Sussex.....	A	9	56,631	2,263·7	6,292	3·9	251·5
Welsford.....	A	7	44,101	2,107·7	6,300	4·9	301·1
".....	B	4	36,065	1,619·7	9,016	4·4	404·9
".....	C	6	41,418	1,914·0	6,903	4·6	319·0
Total number of cows and average yield.....		78	.....	.....	5,857	4·3	255·8

In this table good herd averages of 275, 319 and 404 pounds of fat per cow are worthy of notice.

In the Welsford association these herds include such individual records as 10,310 pounds of milk, 478 pounds of fat, and 10,330 pounds of milk, 472 pounds of fat per cow.

The four cows in herd B, Welsford give *more than twice as much fat* as the four cows in herd D, Penobsquis.

The average test of the herds varies from 3·4 to 5·2 per cent of fat.

TABLE XVII.—Comparisons between Herds in the Province of New Brunswick for Twelve Months' Production, 1910. Weights Only.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Norton.....	A	8	40,702	5,087
Salisbury.....	A	5	31,078	6,217
Total number of cows and average yield.....		13	.....	5,521



TABLE XVIII.—Comparisons between Herds in the Province of Prince Edward Island for the Full Period of Lactation, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Central Lot 13 .....	A	7	33,327	1,178·8	4,761	3·5	168·4
" .....	B	9	37,768	1,322 0	4,196	3·4	146·8
Cornwall.....	A	6	31,523	1,123 2	5,253	3·5	187·2
Crapaud.....	A	6	29,828	1,203·4	4,971	4·0	200·5
" .....	B	1	7,145	231·3	7,145	3·2	231·3
" .....	C	4	24,750	860·7	6,187	3·4	215·1
" .....	D	3	19,999	708·9	6,666	3·5	235·3
" .....	E	7	31,320	1,114·2	4,474	3·5	159·1
" .....	F	4	18,235	731·5	4,558	4·0	185·3
" .....	G	4	27,245	997·0	6,811	3·6	249·2
" .....	H	8	32,750	1,264·7	4,093	3·8	158 0
" .....	I	7	41,396	1,644·3	5,913	3·9	231·9
" .....	J	7	47,554	1,706·9	6,793	3·6	243·8
Dunk River.....	A	3	10,595	430·4	3,531	4·0	143·4
" .....	B	6	24,704	1,008·1	4,117	4·1	168·0
" .....	C	12	62,191	2,303·2	5,199	3·6	191·9
Hillsboro.....	A	6	23,140	1,108·7	3,856	4·7	184·7
New Perth.. ..	A	2	8,057	281·9	4,028	3·4	140·9
North Tryon.....	A	4	23,360	864·0	5,840	3·6	216·0
" .....	B	4	17,687	658 1	4,421	3·7	161·5
North Wiltshire .....	A	5	20,143	1,055·5	4,028	5·2	211·1
Summerside .....	A	7	35,690	1,255·2	5,093	3·5	179·3
" .....	B	6	28,280	1,094·7	4,713	3·8	182·4

The average yield of the 128 cows in this table is 5,005 pounds of milk, 3·7 test, 188·6 pounds of fat.

In herd I, Crapaud, every cow, except one, gives over 219 pounds of fat. In other herds not one cow gives as much as that.

Partly concealed in the average of herd D, Crapaud, is a fine yield of 9,165 pounds of milk, and 330 pounds of fat. Several other cows give over 270 pounds of fat.

TABLE XIX.—Comparisons between Herds in the Province of Prince Edward Island for Twelve Months' Production, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Cornwall.....	A	5	26,202	1,124·7	5,240	4·2	224·9
Crapaud.....	A	8	67,196	2,451·9	8,399	3·6	306·4
" .....	B	2	10,900	400·5	5,450	3·6	200·2
" .....	C	11	77,480	2,970·4	7,043	3·9	270·0
Emerald.....	A	10	53,630	2,110·9	5,363	3·9	211·0
New Perth.....	A	6	22,193	745·8	3,698	3·3	124·3
North Tryon.....	A	4	25,120	938·8	6,280	3·7	234·7

The average yield of the 46 cows in this table is 6,150 pounds of milk, 3·7 test and 233·5 pounds of fat.



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The six cows at New Perth are not heifers, but mature grades, 7, 8 and 10 years old.

One cow included in herd A, Crapaud, has a total yield of 10,660 pounds of milk and 456.4 pounds of fat.

Out of the 11 cows in herd C, Crapaud, seven have yields of over 260 pounds of fat. One cow is credited with the production of 8,785 pounds of milk and 376 pounds of fat. This is *more than four times as much* as one of the 10-year olds at New Perth.

TABLE XX.—Comparisons between Herds in the Province of British Columbia for the Full Period of Lactation, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER Cow.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Comox.....	A	8	44,625	2,072.9	5,578	4.4	239.1
".....	B	6	29,632	1,152.0	4,938	3.8	192.0
".....	C	9	51,770	2,134.5	5,752	4.1	237.1
".....	D	6	21,853	926.6	3,442	4.2	154.4
".....	E	3	18,541	812.2	6,180	4.3	270.7
Cowichan.....	A	1	4,300	162.8	4,300	3.7	162.8
".....	B	5	26,858	1,024.5	5,371	3.8	204.9
".....	C	1	3,850	142.2	3,850	3.6	142.2
".....	D	1	8,500	366.5	8,500	4.3	366.5
".....	E	2	8,252	306.5	4,126	3.7	153.4
".....	F	1	6,605	254.1	6,605	3.9	254.1
".....	G	2	11,024	531.9	5,512	4.8	265.9
".....	H	3	17,355	683.7	5,785	3.9	227.9
".....	I	1	5,510	206.5	5,510	3.7	206.5
".....	J	2	14,850	689.4	7,245	4.6	344.7
".....	K	2	8,858	360.6	4,429	4.0	180.3
".....	L	1	4,574	238.2	4,574	5.1	238.2
".....	M	5	23,539	946.0	4,707	4.5	189.2
".....	N	3	15,158	667.8	5,052	4.0	222.6
".....	O	2	10,825	469.0	5,412	4.3	231.5
".....	P	7	27,340	1,263.1	3,905	4.6	180.4
Eden Bank.....	A	26	152,460	5,787.8	5,863	3.7	222.6
".....	B	6	43,000	1,553.4	7,166	3.4	258.9
".....	C	7	53,238	1,712.2	7,605	3.2	244.6
Islands.....	A	3	24,440	1,265.9	8,146	5.1	421.9
".....	B	3	24,935	1,146.1	8,311	4.5	382.0
Nanaimo.....	A	3	7,457	317.5	2,485	4.2	105.8
".....	B	2	9,353	456.7	4,676	4.8	228.3
".....	C	5	27,710	1,234.1	5,542	4.4	246.8
".....	D	3	10,095	422.1	3,365	4.1	149.7
".....	E	5	21,059	898.6	4,211	4.2	179.7
".....	F	6	29,200	1,462.0	4,866	5.0	243.6
".....	G	2	8,614	374.8	4,307	4.3	177.4

The average yield of the 142 cows in this table is 5,453 pounds of milk, 4.1 test, 225.6 pounds of fat.

Herd A, Islands, has an average of 421.9 pounds of fat for three cows. These *three cows* exceed the yield of the *6 cows* in herd B, Comox, by 113 pounds of fat.

Herd B, Islands, contains a seven-year-old Jersey giving 11,210 pounds of milk and 521 pounds of fat.

In this table 17 cows are included, giving over 300 pounds of fat.

The average of herd A, Eden Bank, stands at a very satisfactory figure for the number of cows concerned.



TABLE XXI.—Comparisons between Herds in the Province of British Columbia for Twelve Months' Production, 1910.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.		AVERAGE YIELD PER COW.		
			Milk.	Fat.	Milk.	Test.	Fat.
			Lbs.	Lbs.	Lbs.		Lbs.
Comox.....	A	12	56,845	2,404·6	4,737	4·2	200·3
".....	B	10	65,845	2,935·4	6,548	4·4	293·5
".....	C	2	12,335	520·1	6,167	4·2	260·0
Clwichean.....	A	11	64,005	2,545·6	5,818	3·9	231·4
".....	B	3	20,815	941·6	6,938	4·5	313·8
".....	C	4	20,008	989·2	5,002	4·9	247·3
".....	D	6	39,264	1,499·6	6,544	3·8	249·9
".....	E	5	27,605	1,094·3	5,521	3·9	218·8
".....	F	11	49,955	2,373·1	4,541	4·7	215·7
".....	G	6	38,732	1,447·8	6,455	3·7	241·4
".....	H	6	36,975	1,651·6	6,162	4·4	275·2
".....	I	11	81,782	3,555·8	7,434	4·3	323·2
".....	J	9	58,702	2,662·5	6,522	4·5	295·7
".....	K	4	27,330	1,258·3	6,832	4·6	314·5
".....	L	8	60,465	2,611·2	7,558	4·3	326·4
".....	M	8	42,562	1,538·8	5,320	3·6	192·3
".....	N	4	25,925	1,115·7	6,481	4·3	278·9
".....	O	2	10,553	537·7	5,276	5·0	268·8
".....	P	7	31,712	1,478·6	4,530	4·6	211·2
".....	Q	5	29,498	1,271·9	5,899	4·3	254·3
".....	R	11	67,815	2,959·5	6,146	4·3	269·0
Eden Bank.....	A	21	125,871	5,098·3	5,993	4·0	242·7
".....	B	4	21,710	745·3	5,427	3·4	186·3
".....	C	3	24,150	905·7	8,050	3·7	301·9
Islands.....	A	4	26,445	1,323·9	6,611	5·0	331·7
".....	B	8	57,789	2,715·3	7,223	4·6	339·4
Nanaimo.....	A	5	20,120	870·5	4,024	4·2	174·1
".....	B	3	8,741	412·5	2,913	4·7	137·5
".....	C	4	19,812	859·5	4,953	4·3	214·8
".....	D	2	16,650	727·1	8,325	4·3	363·5
".....	E	4	25,645	995·2	6,411	3·8	248·8
".....	F	4	22,102	1,071·3	5,525	4·8	267·8
".....	G	3	17,610	820·7	5,870	4·6	273·5
".....	H	4	24,770	1,058·3	6,192	4·2	264·5

The 214 cows in this table have an average of 5,981 pounds of milk, 4·2 test, 257 pounds of fat.

In this table such good average herd yields are found as 10 cows giving 293 pounds of fat, 11 cows with 323 pounds, and 8 cows with 339 pounds of fat each.

Included in these herds are records of individual cows giving 9,465 pounds of milk and 415 pounds of fat, and even as high as 11,995 pounds of milk and 533 pounds of fat.



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TABLE XXII.—Comparisons between Herds in the Province of British Columbia for the Full Period of Lactaton, 1910. Weights Only.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Chilliwack.....	A	6	46,592	7,765
".....	B	6	35,991	5,981
Islands.....	A	7	29,864	4,266

The 19 cows in this table average 5,918 pounds of milk.

One cow in herd A, Islands, gives only 2,718 pounds of milk, while her stable mate gives 6,309 pounds: *more than twice as much.*

TABLE XXIII.—Comparisons between Herds in the Province of British Columbia for Twelve Months Production, 1910. Weights Only.

Name of Association.	Herd.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Chilliwack.....	A	8	56,451	7,056
".....	B	17	141,595	8,329

TABLE XXIV.—Comparisons between Individual Herds for Twelve Months' Production, 1910. Weights Only.

Province.	Herd No.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Nova Scotia.....	38	8	56,654	7,081
New Brunswick.....	39	11	61,819	5,619
Manitoba.....	40	6	41,427	6,904

The 25 cows in this table average 6,396 pounds of milk.



TABLE XXV.—Comparisons between Individual Herds, Full Period of Lactation, 1910.  
Weights Only.

Province.	Herd No.	No. of Cows.	TOTAL YIELD OF HERD.	AVERAGE YIELD PER COW.
			Milk.	Milk.
			Lbs.	Lbs.
Nova Scotia.....	41	5	28,762	5,752
New Brunswick.....	42	5	30,066	6,013
Manitoba.....	43	3	15,785	5,261
Saskatchewan.....	44	3	17,220	5,740

These 16 cows average 5,739 pounds of milk.

TABLE XXVI.—Comparative Yield, by Provinces, of Cows for the Full Period of  
Lactation, 1910.

Province.	Number of Cows.	Average Yield of Milk.	Average per cent of Fat.	Average Yield of Fat.
		Lbs.	Test.	Lbs.
Ontario.....	1,185	6,162	3·4	213·3
" weights only.....	495	6,169	.....	.....
Quebec.....	1,139	4,560	3·9	179·2
" weights only.....	266	4,749	.....	.....
Nova Scotia.....	38	4,986	4·4	221·8
New Brunswick.....	56	4,955	4·1	206·3
" weights only.....	2	6,107	.....	.....
Prince Edward Island.....	128	5,005	3·7	188·6
" " weights only.....	9	5,080	.....	.....
British Columbia.....	142	5,453	4·1	225·6
" weights only.....	19	5,918	.....	.....
Individual herds, weights only.....	16	5,739	.....	.....
Total number of cows and average yield.....	2,688	5,349	3·7	199·0
Total number of cows and average yield, weights only.....	807	5,674	.....	.....





A Dairy Farm in Oxford County.









FIG. 1.  
Herd of Ayrshires, St. Armand, Que. Cow Testing Association.



FIG. 2.—Two Ayrshires, St. Armand, Que. Cow Testing Association.  
Right : age 13, yield 8,170 lb, milk, 3·6 test, 300 lb. fat. Left : age 12, yield 7,707 lb. milk, 3·8 test, 293 lb. fat







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TABLE XXVII.—Comparative Yield, by Provinces, of Cows for Twelve Months' Production, 1910.

Province.	Number of Cows.	Average Yield of Milk.	Average per cent of Fat.	Average Yield of Fat.
		Lbs.	Test.	Lbs.
Ontario.....	403	7,417	3·4	256·0
" weights only.....	222	7,720		
Quebec.....	229	6,119	3·8	237·8
" weights only.....	54	6,547		
Nova Scotia.....	31	5,663	4·5	200·8
New Brunswick.....	78	5,857	4·3	255·8
" weights only.....	13	5,521		
Prince Edward Island.....	46	6,150	3·7	233·5
" weights only.....	2	5,285		
British Columbia.....	214	5,931	4·2	257·0
" weights only.....	25	7,921		
Sundry individual herds.....	4	5,973	3·8	229·1
Sundry individual herds, weights only.....	25	6,396		
Total number of cows and average yield.....	1,005	6,577	3·8	251·3
Total number of cows and average yield, weights only.....	341	7,354		

In these two tables the records are tabulated of 4,841 cows; 1,970 more than last year.

For the encouragement of members of our associations who are aiming still higher it may be noted that the average yield of 639 cows in one testing association in Sweden last year was 10,064 pounds of milk, 3·12 test, and 345 pounds of butter. The increase per cow in this association in nine years is 3,174 pounds of milk, and 109 pounds of butter.

Sweden has 662 cow testing associations.



TABLE XXVIII.—Summary of Average Monthly Yields, 1910.

Month and Province.	Total Number of Cows.	AVERAGE YIELD.		
		Milk.	Test.	Fat.
January—		Lbs.		Lbs.
Prince Edward Island .....	140	635	3·8	24·1
British Columbia.....	447	553	4·3	23·7
Quebec.....	283	515	4·2	21·7
Ontario.....	538	579	3·6	21·2
Nova Scotia.....	81	474	4·4	20·8
New Brunswick.....	162	475	4·3	20·8
General average yield.....	1,651	550	4·0	22·1
General average weights only.....	444	538	.....	.....
February—				
Prince Edward Island.....	126	665	3·7	24·8
New Brunswick.....	139	573	4·3	24·5
British Columbia.....	473	561	4·2	23·5
Ontario.....	566	648	3·6	23·3
Nova Scotia.....	94	520	4·4	23·0
Quebec.....	255	574	4·0	22·9
General average yield.....	1,663	597	3·9	23·6
General average weights only.....	462	598	.....	.....
March—				
Ontario.....	700	744	3·5	26·0
Prince Edward Island.....	135	678	3·7	25·6
Nova Scotia.....	99	560	4·4	24·9
British Columbia.....	481	573	4·2	24·0
New Brunswick.....	151	556	4·3	23·8
Quebec.....	346	608	3·8	22·8
General average yield.....	1,912	646	3·8	24·6
General average weights only.....	437	690	.....	.....
April—				
Ontario.....	1,492	823	3·3	27·1
British Columbia.....	518	637	4·0	26·0
Nova Scotia.....	123	590	4·4	25·9
Prince Edward Island.....	157	664	3·7	24·9
New Brunswick.....	175	557	4·1	23·3
Quebec.....	1,077	590	3·6	21·4
General average yield.....	3,542	696	3·6	24·9
General average weights only.....	967	754	.....	.....
May—				
Ontario .....	2,633	903	3·3	29·9
Nova Scotia.....	153	639	4·4	28·5
British Columbia.....	583	696	4·1	28·2
Prince Edward Island.....	235	706	3·8	26·4
Quebec.....	2,724	687	3·7	25·4
New Brunswick .....	269	623	4·0	25·0
General average yield.....	6,597	771	3·5	27·5
General average weights only.....	1,385	866	.....	.....
June—				
Prince Edward Island.....	908	819	3·8	31·7
Ontario.....	3,065	946	3·3	30·9
Nova Scotia.....	208	689	4·3	30·0
Quebec.....	3,684	743	3·7	27·5
British Columbia.....	592	662	4·0	26·4
New Brunswick.....	347	666	3·9	26·0
General average yield.....	8,804	812	3·6	29·0
General average weights only.....	1,602	913	.....	.....



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TABLE XXVIII.—Summary of Average Monthly Yields, 1910—*Continued.*

Month and Province.	Total Number of Cows.	AVERAGE YIELD.		
		Milk.	Test.	Fat.
July—		Lbs.		Lbs.
Prince Edward Island.....	1,046	776	3·7	29·0
Ontario.....	3,130	824	3·3	27·1
Nova Scotia.....	207	595	4·3	25·5
Quebec.....	3,524	656	3·8	24·9
New Brunswick.....	274	625	3·9	24·4
British Columbia.....	526	603	4·0	24·1
General average yield.....	8,707	725	3·6	26·1
General average weights only.....	1,479	788	.....	.....
August—				
Ontario.....	3,020	776	3·4	26·3
Prince Edward Island.....	863	679	3·7	25·5
Quebec.....	3,335	570	3·9	22·6
British Columbia.....	500	544	4·1	22·3
Nova Scotia.....	151	528	4·1	21·9
New Brunswick.....	229	524	4·1	21·9
General average yield.....	8,098	671	3·7	24·9
General average weights only.....	1,249	761	.....	.....
September—				
Ontario.....	2,889	720	3·5	25·3
Prince Edward Island.....	693	601	3·9	23·3
British Columbia.....	403	541	4·3	23·1
Quebec.....	2,850	520	4·1	21·4
New Brunswick.....	218	473	4·4	20·4
Nova Scotia.....	134	436	4·3	18·7
General average yield.....	7,187	606	3·8	23·2
General average weights only.....	1,477	716	.....	.....
October—				
British Columbia.....	414	536	4·3	23·2
Ontario.....	2,619	607	3·6	21·9
Prince Edward Island.....	526	469	4·1	19·4
Nova Scotia.....	73	417	4·6	19·0
New Brunswick.....	161	402	4·6	18·5
Quebec.....	2,130	433	4·2	18·5
General average yield.....	5,923	519	4·0	20·4
General average weights only.....	1,223	576	.....	.....
November—				
British Columbia.....	374	542	4·4	23·5
Nova Scotia.....	74	467	4·6	21·1
New Brunswick.....	113	420	4·7	19·5
Ontario.....	1,565	513	3·8	19·4
Prince Edward Island.....	265	468	4·2	19·1
Quebec.....	1,217	362	4·4	15·9
General average yield.....	3,608	458	4·0	18·7
General average weights only.....	1,054	483	.....	.....
December—				
Nova Scotia.....	71	571	4·5	25·6
British Columbia.....	302	547	4·3	23·7
New Brunswick.....	72	447	4·9	22·0
Prince Edward Island.....	106	514	4·0	20·4
Ontario.....	927	529	3·6	19·3
Quebec.....	607	369	4·4	16·4
General average yield.....	2,085	484	4·0	19·5
General average weights only.....	789	440	.....	.....



These average monthly yields are five per cent higher than those of 1909.

In this table the yields are arranged according to the weight of butter fat. It thus becomes of interest to notice the varying order of the several provinces month by month. Ontario heads the list five months, so does Prince Edward Island. In August, only Ontario and Prince Edward Island have an average that is above the general average in both milk and fat: all the other provinces (totalling 4,215 cows out of the 8,098 included in the 'general average yield') have yields of milk and fat *below* the general average.

The cows included in 'Weights only' are those owned by men who did not take samples for testing, but were only recording weights of milk. These were almost all in Ontario and Quebec.

The total number of cows recorded during the year was 59,855 for weights and tests, and 12,568 for weights only, thus giving a total of 72,423. This is an increase over 1909 of 18,540 records.

In connection with this table, one point worth notice, is the marked differences in both yields of milk per cow, and the average test. For instance, in October the test in New Brunswick runs one per cent higher than in Ontario; and in September the yield per cow is 200 pounds of milk higher in Ontario than Quebec, and 284 pounds higher than the average in Nova Scotia.

These monthly average yields offer a large scope for instituting comparisons thereby calling attention to the urgent need for improvement in several of our dairy districts.

In the month of June, for example, the average yield of the 3,684 cows recorded in Quebec is 27.5 pounds of fat. The lowest average yield in any association in that province is 20.9 pounds of fat at Ayers Cliff, and the highest is 42.0 pounds at Ruisseau St. George. Without taking these extreme cases, where one is double that of the other, but comparing two that might be termed medium high and medium low, it means that where a given weight of fat is produced by 100 cows in one association it takes 146 cows in others to produce as much fat. As this comparison holds good for several associations for several months in several provinces it emphasizes the enormous saving that can be effected when our dairy farmers take the trouble to weigh and test systematically so as to save themselves totally unnecessary trouble from dairying with inefficient cows.

PERCENTAGE OF FAT.

TABLE XXIX.—Average percentage of Fat during the Whole Year 1910, by Provinces.

Province.	Total Number of Tests.	Total Milk.	Total Fat.	Average Test.
		Lbs.	Lbs.	% Fat.
Ontario.....	23,144	17,590,166	600,412	3.41
Quebec....	22,042	13,048,762	507,330	3.88
British Columbia.....	5,613	3,310,909	137,623	4.15
Prince Edward Island. ....	5,200	3,509,165	134,576	3.83
New Brunswick.....	2,310	1,275,697	55,109	4.31
Nova Scotia. ....	1,468	823,555	36,026	4.37

These average tests for percentage of fat correspond very closely with the average tests in 1909.

During 1910 the number of cows tested each month in the Dominion varied from 1651 in January to 8817 in June, with a total of 59,855 tests of fat made during the year. The totals of the monthly yields were 39,558,254 pounds of milk and 1,471,076 pounds of fat, thus showing an average of 3.72 per cent of fat.



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TABLE XXX.—AVERAGE PERCENTAGE OF FAT, 1910, BY MONTHS AND PROVINCES.

Month.	ONTARIO.		QUEBEC.		NEW BRUNSWICK.		NOVA SCOTIA.		PRINCE EDWARD ISLAND.		BRITISH COLUMBIA.		TOTAL.	
	Number of Cows.	Average Test.	Number of Cows.	Average Test.	Number of Cows.	Average Test.	Number of Cows.	Average Test.	Number of Cows.	Average Test.	Number of Cows.	Average Test.	Number of Cows.	Average Test.
January.....	538	3·6	283	4·2	162	4·3	81	4·4	140	3·8	447	4·3	1,651	4·0
February.....	566	3·6	265	4·0	139	4·3	94	4·4	126	3·7	473	4·2	1,663	3·9
March.....	700	3·5	346	3·8	151	4·3	99	4·4	135	3·7	481	4·2	1,912	3·8
April.....	1,492	3·3	1,077	3·6	175	4·1	123	4·4	157	3·7	518	4·0	3,542	3·6
May .....	2,633	3·3	2,724	3·7	269	4·0	153	4·4	235	3·8	583	4·1	6,597	3·5
June.....	3,065	3·3	3,684	3·7	347	3·9	208	4·3	908	3·8	592	4·0	8,804	3·6
July.....	3,130	3·3	3,524	3·8	274	3·9	207	4·3	1,046	3·7	526	4·0	8,707	3·6
August.....	3,020	3·4	3,335	3·9	229	4·1	151	4·1	863	3·7	500	4·1	8,098	3·7
September .....	2,889	3·5	2,850	4·1	218	4·4	134	4·3	693	3·9	403	4·3	7,187	3·8
October .....	2,619	3·6	2,130	4·2	161	4·6	73	4·6	526	4·1	414	4·3	5,923	4·0
November.....	1,565	3·8	1,217	4·4	113	4·7	74	4·6	265	4·2	374	4·4	3,608	4·0
December .....	927	3·6	607	4·4	72	4·9	71	4·5	106	4·0	302	4·3	2,085	4·0



### GOOD REASONS FOR COW TESTING.

From the correspondence with members of cow testing associations the following good reasons why every dairy farmer should commence and continue the system have been classified.

#### A.—INDIVIDUAL COWS.

1. Cow testing enables one to find out the poorest cows, those not paying for their feed, so that they may be got rid of.

In many cases one-quarter of the cows in the herd have been discovered to be not worth keeping, in some cases half the herd and even as high as three-quarters have been turned out.

This means certainty in dairying, no more guess work as to individual performance.

2. Cow testing shows that many cows considered only average are really the best in the herd.
3. Cow testing points out definitely which cows are the best producers, both in milk and butter fat.
4. Cow testing proves that many cows considered the highest in test are really the lowest.
5. Cow testing saves good cows from being beefed, they are found to be profitable when actual yield and cost of feed are considered.
6. Cow testing shows that many fine looking cows do not bring in much cash from the factory.
7. Cow testing helps to discover the great difference in persistency of flow.
8. Cow testing brings to notice the slightest variation in flow and urges one to seek for the cause of shrinkage.

#### B.—HERDS AS A WHOLE.

9. Cow testing helps to increase the total yield of milk and fat from the same number of cows.
10. Cow testing brings in larger returns from fewer cows.
11. Cow testing helps to build up a profitable herd quickly because heifers can be selected from the best cows.

#### C.—FEED.

12. Cow testing allows more discrimination in feeding, apportioning the grain according to the yield of fat.
13. Cow testing emphasizes the benefit of liberality in feeding succulent, digestible food stuffs.
14. Cow testing abundantly proves that it pays handsomely to give dairy cows the best of care and kind treatment; this includes regularity as to milking, early stabling in the fall, protection from cold rains, spraying to protect from flies; and above all, particular attention to cleanliness, light and ventilation in the stable.
15. Cow testing demonstrates that many good cows can be kept at a smaller cost of feed. This is not stinginess, but economy.



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## D.—THE DAIRYMAN HIMSELF.

16. Keeping records makes one more observant of all those little details that go to make up success.
17. Because cow testing develops this faculty of observation and induces reading and study, members of associations are becoming far better dairymen.
18. There is a great stimulus received from comparing notes and results with other members.
19. The hired men take more interest in the cows, consequently they give them better attention and get more milk.
20. Neighbouring farmers who originally scoffed at the idea of cow testing have become impressed with the results obtained by members.
21. A great measure of personal satisfaction results from studying each cow as an individual performer, not as a mere machine.
22. Cow testing increases one's love for good cows, and creates infinitely more pleasure in the work of the farm.
23. The definite knowledge obtained from the regular monthly testing is much more satisfactory in every way than getting an occasional result only once or twice a year.
24. Financially, cow testing is of very great benefit; young bulls sell for higher prices. Cows sell for double the old prices when buyers see records.
25. Cow testing not only interests the boys and girls more and more in farm life, but materially assists in providing additional home comforts for the women and children.

## INCREASES IN YIELDS.

A few of the positive gains in milk yields and cash receipts are given below as samples of what is being accomplished by men who take up cow testing systematically.

## ONTARIO.

Dr. D. Robertson, Milton, writes, 'Our herd of cows averaging 4,000 pounds of milk six years ago, now average over 8,000 pounds.' The yield of this herd is thus seen to be *more than double* what it was.

W. R. Bigham, Culloden, writes, 'We have increased the average yield per cow about 2,000 pounds, our herd averaged about 7,300 pounds for 1910.'

Wm. Stock, Cassel, writes, 'My herd has increased from 5,000 to 8,000 pounds for each cow in two years.' This is a *60 per cent increase*.

H. R. Nixon, St. George, writes, 'My herd has increased ten per cent in the milk yield.'

E. Mollen, Cambray, writes, 'I have achieved an increase of at least twenty-five per cent.'

W. C. Shearer, Bright, writes, 'Our average has raised from 6,000 to 6,666 pounds in three years.'

Joseph Standeaven, St. Marys, writes, 'The average per cow was 384 pounds of milk higher than in 1909.'

J. W. Jewson, Stone Quarry, writes, 'We have a marked increase in pounds of milk produced, in some cases equal to 1,000 pounds per cow.'

E. O. Finch, Mapleton, writes, 'All the herd show a large increase, one four-year-old gave 12,000 pounds of milk.'

Jonathan Austin, Lynn Valley, writes, 'My herd now averages over 6,000 pounds per cow.'



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George Bishop, Norwich, writes, 'Two years ago before keeping records our herd of 12 cows averaged less than 6,000 pounds; this year, 13 cows average over 8,000 pounds.' This is an increase of *over 33 per cent*.

W. E. Thomson, Woodstock, writes, 'I have raised the average of my herd from 5,500 to 10,400 pounds per cow.' This is a case where the yield has been *almost doubled*.

William Kaufman, Cassel, writes, 'My cows gave me about 1,000 pounds more milk in 1910 than in 1909.'

Thos. F. Ritchie, Allan's Mills, writes, 'My five best cows gave over 1,100 pounds more milk in June this year than in June last year.'

Walter Paterson, Ingersoll, writes, 'In 1907 the average of 11 cows was 5,852 pounds, and in 1910 the average of 9, including heifers, was up to 7,446 pounds.' This is an increase of 1,594 pounds, or *27 per cent*.

Wm. Beddie, Prescott, writes, 'In 1907 the average yield was 3,794 pounds, in 1910 it was 6,000 pounds.' This is an increase of 2,206 pounds per cow, or *fifty per cent*, in three years.

M. Hartley, Norwich, writes, 'Our 14 cows including six heifers, now average 9,000 pounds of milk.'

J. K. Moore & Son, Peterborough, with a herd of twenty, increased the yield 2,269 pounds of milk per cow in two years, or *33 per cent*.

H. German, St. George, writes, 'Our increase is from 7,000 to 9,000 pounds of milk per cow.'

## QUEBEC.

Chas. Wilkins, East Farnham, writes, 'In 1908 our cows gave a revenue of \$20 each, but in 1910 it was \$41.43,' or *more than twice as much*.

S. W. Talmadge, Sweetsburg, writes, 'My cows are doing about one-half better.'

Geo. H. Montgomery, Philipsburg, writes, 'The revenue was increased \$604 in four years.' This is equivalent to a gain of *thirty-two per cent*.

H. F. Green, Clarenceville, writes, 'Our cows have increased the flow of milk one-third.'

H. D. Snow, Coaticook, writes, 'Our average yield has increased at least twenty-five per cent.'

D. F. Hawley, Nutt's Corner, writes, 'We have made a twenty-five per cent gain.'

S. A. Cleland, Hemmingford writes, 'Previous to weighing and keeping records, our average returns per cow were only about \$40, last year it was \$60.' This is an increase of *seventy-two per cent*.

W. P. Dimick, South Stukeley, writes, 'It would be hard to estimate the value of cow testing in dollars and cents as yet, but I would not take a good deal for the knowledge I now have.'

F. E. Miller, Clarenceville, writes, 'The returns from my eleven cows this year exceeded those of last year by \$150.'

W. F. Kay, Philipsburg, has increased the yield from 5,218 pounds of milk from 13 cows in 1906, to 6,482 pounds from 17 cows in 1910. This is *twenty-four per cent*.

Geo. Bradley, St. Armand, has increased in three years from 3,986 pounds per cow to 5,061 pounds. This is *twenty-seven per cent*.

W. Auger, Ste. Emelie de Lotbinière, has increased in three years from 3,275 pounds per cow to 4,303 pounds. This is *thirty-one per cent*.

Theo. Trudel, St. Prosper, with 15 cows has raised the average from 5,534 pounds per cow to 6,725 pounds in three years.

R. H. Reynolds, Aird, in 1908 had an average of 3,792 pounds of milk from 10 cows, but in 1910 his 12 cows averaged 7,269 pounds of milk and 230 pounds of fat.



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This is an increase of *eighty-one per cent* in the yield of fat, and *ninety-one per cent* in the yield of milk.

M. T. Macfie, Aird, also in two years has increased *sixty-one per cent*, from 2,801 pounds of milk up to 4,602 pounds per cow.

T. B. Stark, Kelvingrove, with 13 cows in 1908 averaged 4,199 pounds of milk, but in 1910 the average yield of 15 cows was 5,760 pounds of milk, or an increase of *thirty-seven per cent*.

Trefflé Morin, Notre Dame de Stanbridge, writes: 'Our cows have increased 1,000 pounds of milk on the average over last year.'

Cyrille Laurin fils, Côté St. Herman, writes: 'We have made over \$15 per cow more this year'

## MARITIME PROVINCES.

Robert Murray, Marshville, N.S., writes, 'From 4 cows in 1908 I sold 587 pounds of butter; from 6 cows in 1910 I sold 1,400 pounds.' This is an increase of *sixty-eight per cent*.

Hugh J. McLeod, Heathbell, N.S., writes, 'We are getting about 50 per cent more milk.'

Byron McLeod, Penobsquis, N.B., writes, 'The average of butter fat increased twenty pounds per cow in 1910 over 1909.'

J. L. Blakeney, Victoria Mills, N.B., writes, 'We are getting at least one-quarter more milk.'

Ora C. Hicks, Petitcodiac, N.B., writes, 'We have greatly increased in total of milk from the same number of cows.'

S. J. Goodliffe, Sussex, N.B., writes, 'In seven years the average was brought up from 4,590 to 7,335 pounds of milk per cow.' This is an increase of *seventy per cent*.

M. A. Smith, Hoyt Station, N.B., writes, 'I have *just about doubled* the average yield of milk.'

T. W. Bentley, Kensington, P.E.I., writes, 'My increase is about \$15 per cow in three years.'

P. S. McIntyre, Kensington, P.E.I., writes, 'Our six cows increased 4,800 pounds over last year.'

W. H. McGregor, Miscouche, P.E.I., writes, 'We have increased several hundred pounds of milk per cow.'

W. D. McCormack, Launching, P.E.I., writes, 'Our cows have increased 2,000 pounds of milk.'

M. C. Quigley, North Tyron, P.E.I., writes, 'I am getting about \$20 per cow more.'

A. McRae & Sons, East Royalty, P.E.I., writes: 'We are averaging at least *one third more* per cow.'

J. Seaman, Breadalbane, P.E.I., writes, 'My herd now gives me *three times as much milk* per cow.'

## BRITISH COLUMBIA.

Halliday Bros., Sandwick, write, 'We have *more than doubled* our output.'

G. S. Harris, Moresby Island, writes, 'I have raised my average yield of fat *nearly forty pounds* per cow.'

G. G. Baiss, Maple Bay, writes, 'In  $3\frac{1}{2}$  years the average per cow has increased from \$7 per month to \$12 per month.' This is over *seventy-one per cent*.

A. W. Haine, Dewdney, writes, 'In 5 years we have raised the average more than 2,000 pounds of milk per cow.'



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Horatio Webb, Sardis, writes, 'The average of my herd has increased *one-third* in the amount of butter fat per cow.'

The increases detailed above, coupled with those published in the report of last year, furnish the strongest possible incentive for every dairy farmer to test each cow in his herd systematically. Such results mean definite saving of time, energy, feed and thought at present bestowed on cows not worth keeping; and mean, besides the very satisfactory increases in cash receipts, a decided raising of the whole tone of dairy farming.



## PART II.—EXTENSION OF MARKETS







## PART II—EXTENSION OF MARKETS.

FROM THE CHIEF OF THE EXTENSION OF MARKETS DIVISION, TO THE DAIRY AND COLD STORAGE COMMISSIONER.

SIR,—I have the honour to present herewith the report of the Extension of Markets Division for the year ending March 31, 1911.

During the year, nineteen men were employed in the outside service of this Division, twelve as cargo inspectors at the ports of Montreal, Quebec, Liverpool, Manchester, London, Glasgow and Bristol, six as refrigerator car inspectors in connection with the special railway services for the carriage of butter, which were in operation from the middle of May to the middle of October, and one inspector in the maritime provinces to look after shipments of Prince Edward Island cheese and Nova Scotian apples exported through the port of Halifax. Eight of the above staff are employed by the year, the others for periods ranging from five to seven months.

### IMPROVED TRANSPORTATION CONDITIONS FOR PRINCE EDWARD ISLAND CHEESE.

On account of complaints received from London, England, that a few shipments of Prince Edward Island cheese had arrived there in a heated condition in the summer of 1909, it was decided to detail an inspector to look into the conditions surrounding the transportation of cheese from the factory in Prince Edward Island to the steamship at Halifax, and accordingly in June, Mr. Thomas A. Peters was assigned to this work. He accompanied several lots of cheese from the factory on the Island to Halifax and by the use of thermographs secured a record of the temperature en route. In each case the same thermograph was placed in the ship at Halifax so that we had a continuous record of temperature from Charlottetown to Pictou by boat, Pictou to Halifax by rail and Halifax to London by steamer. This office received full reports on each shipment, both from Mr. Peters and from the cargo inspectors at London and Liverpool, and as soon as the thermograph records were received from the latter, blue print copies were made in this office and forwarded to the secretary of the Prince Edward Island Dairymen's Association and to the secretary of the Cheese Board, Charlottetown. Following is a copy of Mr. Peter's final report:—

CHARLOTTETOWN, P.E.I., October 1, 1910.

W. W. MOORE, Esq.,  
Chief, Markets Division,  
Ottawa.

DEAR SIR,—As per your instructions, during the months of July, August and September I have been following the shipments of cheese from Prince Edward Island to Halifax to be forwarded to England, placing thermographs with each shipment at Charlottetown, transferring same to cars at Pictou and stowing with cheese on board steamships at Halifax. Up to September 30, I have followed twelve shipments sent to London and Liverpool.

### CONDITIONS OF CARRIAGE.

Cheese were shipped from Charlottetown per ss. *Northumberland* to Pictou and I found them to be carefully handled. As the steamer's boiler and machinery are in



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the centre of the boat, and the storage deck in near vicinity, there is naturally some heat, but as the passage is only about three and a half hours, very little, if any, damage is done.

At Pictou, cheese are transferred to Intercolonial Railway and were well handled there also. From conversation with different officials, I learned that the practice in former years had been to close all car doors tightly and after arrival at Halifax, if steamer was not ready, the cars often stood on track in the open for several days.

I made arrangements to have railway agent at Pictou notified one day in advance of shipment, and he had cars placed in shed over night with doors left open. When loaded both sides and end doors were left open three or four inches to give a current of air. These cars left Pictou at 7.20 p.m., arriving in Halifax early next morning, and on arrival were immediately placed in shipping shed at steamship wharf. As this shed is built over the water and the doors are open all day, I found the temperature to be an average of 4 degrees lower than up town 'in the shade.'

To test the difference between cars closed and others left slightly open, I placed thermographs in two cars from Alberton to Charlottetown on the same day. The temperature in the open car was 4 degrees lower than in the closed one. These cars were two days on the road, lying at Summerside over night.

#### STEAMSHIPS AND LOADING.

The Furness Withy steamers on which all these cheese were shipped have no cold storage chambers but all have ventilators and some of them have fans to create a current of air in the hold. Loading was mostly done by sliding the boxes down a chute. As the cheese were all stowed in 'tween decks the slide was not steep. A man stood near the bottom and caught each box, none being allowed to strike. Slings holding twenty-seven boxes were tried but did not work as well as the slide.

#### CONCLUSIONS.

With care being taken along the route to see that car doors are left open so there will be a current of air, and if the cars are placed under cover at once on arrival at Halifax, I see no reason why the cheese should not be delivered on board the steamships in good order. If they are to arrive in Halifax three or more days in advance of the loading on steamer (in warm weather) they should be loaded in iced refrigerator cars at Pictou and re-iced after arrival in shed at Halifax.

Yours truly,

THOS. A. PETERS.

That our supervision of these shipments was productive of good results is evident by the following resolution which was passed by the Prince Edward Island Cheese Board, Charlottetown, on October 14, 1910:—

'Resolved, that this Cheese Board hereby record its appreciation of the result of the attention to shipment of cheese from our province this season. The improvement has been highly satisfactory.'

'Resolved, that a copy of this resolution be forwarded to Mr. Ruddick.'

#### THE OUTLOOK FOR CANADIAN TOMATOES IN GREAT BRITAIN.

Owing to the number of inquiries received by this branch regarding the possibility of supplying Canadian tomatoes to the markets of Great Britain, a circular was prepared by this division and issued in printed form in December last as No. 3 of series D and C. Copies will be furnished free on application to this office.



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TRIAL SHIPMENTS OF PEACHES

In September and October trial-shipments of peaches were made to Great Britain by this Branch in order to determine if Canadian peaches could be landed in good condition and, if so, whether or not they would find a remunerative market. The peaches were wrapped in tissue and were packed in wood wool in single layer cases holding from 20 to 23 peaches each. For convenience in handling three cases were banded together and the packing and packages were pronounced perfect by the receivers in the Old Country. The fruit was packed at St. Catharines, carried to Montreal in refrigerator cars and shipped in cold storage to the following markets:—Liverpool, Manchester, Leeds, London, Bristol, Cardiff, Birmingham and Glasgow. The result of these shipments indicates that there is a profitable market in Great Britain for a limited quantity of Canadian peaches provided they are of fine quality, that they are picked at the right time, and that they are carefully and properly packed. Full information regarding these shipments will be found in bulletin No. 27, which is now in the press.

COMPARATIVE PRICES OF BUTTER, CHEESE, HOGS, &C., IN VARIOUS MARKETS.

For some years the compilation of wholesale market prices of farm and food products in various markets in Canada, the United States and England has formed part of the work of this Division and in view of the interest recently aroused in the question of comparative market prices, as well as for the sake of a permanent record, I have deemed it desirable to incorporate in this report some of the statements we have prepared, covering the period from the first of the year 1910 to March 31, 1911.

STATEMENT showing Range of Wholesale Prices for Butter at Boston, New York, Chicago, Toronto and Halifax, for each Month of 1910.

	BOSTON.	NEW YORK.	CHICAGO.	MONTREAL.	TORONTO.	HALIFAX.
Month.	"Firsts" and "Extras."	"Firsts" and "Extras."	"Firsts" and "Extras."	"Finest Creamery" (Solid pack).	"Finest Creamery" (Solid pack)	"Best Creamery Solids."
1910.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
January. ....	30 - 34½	29 - 35	28 - 35	25½ - 26	26 - 27	25½
February... ..	28 - 32½	26 - 31	26 - 30	25½ - 26	26 - 28	25½
March. ....	28 - 32½	29½ - 34	28 - 32½	25½ - 28	26 - 28	25½
April. ....	29 - 32	27½ - 32	27 - 32	28 - 32	27 - 29	27½
May. ....	27½ - 31	27½ - 29	25 - 28½	24 - 30	23 - 27	30½
June. ....	27 - 29	26½ - 28½	26½ - 28½	22½ - 23¾	22 - 23	24½
July. ....	27 - 29½	26 - 29	26 - 29½	22½ - 23	22 - 23	24½
August. ....	27 - 30	26½ - 31	26½ - 29½	22 - 24	23 - 24	23
September. ....	27 - 30	27 - 31	26 - 31	23¾ - 25	23 - 24	24
October. ....	27 - 29½	27 - 31	26 - 31	24 - 24½	24 - 25	24½
November. ....	28 - 31½	27 - 32	26½ - 30½	24½ - 25½	.. - 25	24½
December. ....	27 - 30	26½ - 31	25½ - 30	25½ - 26	.. - 25	25½

NOTE.—In Boston, New York and Chicago the highest grade of butter is classed as 'Specials,' the next grade as 'Extras' and the next as 'Firsts.' It will be noted that 'Specials' are not included in the above statement which is confined to the next two lower grades. In each case the lowest quotation for 'Firsts' and the highest quotation for 'Extras' in each month is given.

In Montreal and Toronto the lowest and highest quotations in each month for the best grade of creamery butter packed solidly in boxes is given.

(United States prices taken from the *New York Produce Review*; Canadian prices from *Montreal Trade Bulletin*, *Farmer's Advocate*, &c.)



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STATEMENT showing Wholesale Prices for Butter at Boston, New York, Chicago, Montreal, Toronto and Halifax, each week from January 9, to March 27, 1911.

Week.	BOSTON.	NEW YORK.	CHICAGO.	MONTREAL.	TORONTO.	HALIFAX.
	"Extras."	"Extras."	"Extras."	"Finest Creamery." (Solid pack.)	* "Creamery Prints."	"Creamery Solids."
1911.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Jan. 9.....	30 - 31	27½ - ..	28	25½ - ..	25½ - 26	26 - 27
" 16.....	29 - 30	26 - ..	25	25¼ - 25½	25 - 25½	26 - 27
" 23.....	28 - 29	25 - 25½	25	25¼ - 25½	24½ - 25	26 - 27
" 30.....	28 - 29	25 - 25½	25	25 - 25½	23 - 26	26 - 27
Feb. 6.....	28 - 29	26 - 26½	25	25 - 25½	26 - 28	26 - 27
" 13.....	28 - 29	27 - 27½	26½	24½ - 25	25 - 27	.....
" 20.....	.....	25 - 26	.....	24 - 25	25 - 27	.....
" 27.....	27 - 28	24 - ..	26½	26 - 26½	26 - 27	25 - 28
March 6.....	25½ - 26½	24 - ..	26	26 - 26½	.....	25 - 28
" 13.....	.....	25½ - 26	26	26 - 27	24 - 25	25 - 27
" 20.....	25 - ..	.. - 24½	25	26 - 27	.....	25 - 27
" 27.....	23½ - ..	22½ - ..	22	26 - 26½	26 - 27	25 - 27

\* In Toronto the price of "creamery prints" is usually one cent per pound higher than creamery "Solid pack."

NOTE.—Boston, New York and Chicago quotations taken from the *Elgin Dairy Report*, Elgin, Illinois; Montreal quotations from the *Gazette*, Montreal, and Toronto quotations from *The Weekly Sun*, Toronto.

STATEMENT showing Range of Wholesale Prices for Cheese at Boston, New York, Chicago, Montreal and Toronto, each month of 1910.

Month.	Boston.	New York.	Chicago.	Montreal.	Toronto.
1910.	Cts.	Cts.	Cts.	Cts.	Cts.
January .....	15 - 17½	17 - 17½	.....	11¾ - 12¼	..... - 13½
February .....	15 - 17½	..... - 17½	16 - 16¾	12 - 12¾	..... - 13
March .....	15 - 17½	..... - 17½	16¼ - 16½	12½ - 13	..... - 13
April .....	15 - 17½	17 - 17½	14 - 15¼	11¾ - 13	..... - 13
May .....	15 - 15½	13½ - 14½	14 - 14½	11 - 11¾	12 - 13
June .....	..... - 15	13¾ - 14½	15 - 15½	10¾ - 11¾	11 - 12
July .....	..... - 15½	14¼ - 15¼	15½ - 16¼	10¾ - 11¾	11½ - 12
August .....	14¾ - 15½	14¼ - 15½	15½ - 16½	10¾ - 11¼	11½ - 12
September .....	14½ - 15½	15 - 15½	15½ - 16¼	11 - 11¾	..... - 12
October .....	14 - 15¼	14¾ - 15¼	15 - 16½	11¾ - 11¾	..... - 12
November .....	14 - 15	15 - 15½	15 - 16	11¾ - 11¾	..... - 12
December .....	14 - 15	15¼ - 15½	14½ - 15½	11¾ - 12¾	..... - 12





FIG. 1.—A British Columbia Creamery.



FIG. 2.—A Northern Ontario Creamery showing Tanks for Collecting Cream.









FIG. 1. Fruit Growing on the St. John River, above Fredericton, N. B.



FIG. 2.—A McIntosh Red Apple Tree in New Brunswick.







SESSIONAL PAPER No. 15a

STATEMENT showing Wholesale Prices for Cheese at Boston, New York, Chicago, Montreal and Toronto, each week from January 9 to March 27, 1911.

Week.	BOSTON.	NEW YORK.	CHICAGO.	MONTREAL.	TORONTO.
	"N.Y. Twins."	"Fancy Coloured."	"Young Americas."	"Westerns."	"Westerns."
1911.	Cts.	Cts.	Cts.	Cts.	Cts.
Jan. 9 .....	14 <sup>1</sup> / <sub>2</sub> - 15	15 <sup>1</sup> / <sub>2</sub> - ..	14 <sup>3</sup> / <sub>4</sub>	12 - 12 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>
" 16 .....	14 <sup>1</sup> / <sub>2</sub> - 15	15 <sup>1</sup> / <sub>4</sub> - 15 <sup>1</sup> / <sub>2</sub>	14 <sup>3</sup> / <sub>4</sub>	11 <sup>5</sup> / <sub>8</sub> - 12 <sup>1</sup> / <sub>4</sub>	12 <sup>1</sup> / <sub>2</sub>
" 23 .....	14 <sup>1</sup> / <sub>2</sub> - 15	15 - 15 <sup>1</sup> / <sub>4</sub>	15 <sup>1</sup> / <sub>4</sub>	11 <sup>5</sup> / <sub>8</sub> - 12 <sup>1</sup> / <sub>4</sub>	13
" 30 .....	14 <sup>1</sup> / <sub>4</sub> - 15	15 - ..	15 <sup>1</sup> / <sub>4</sub>	11 <sup>3</sup> / <sub>4</sub> - 12 <sup>1</sup> / <sub>2</sub>	..
Feb. 6 .....	14 <sup>1</sup> / <sub>2</sub> - 15	14 <sup>1</sup> / <sub>2</sub> - 15	15	11 <sup>3</sup> / <sub>4</sub> - 12 <sup>1</sup> / <sub>2</sub>	13
" 13 .....	14 <sup>1</sup> / <sub>2</sub> - 15	14 <sup>1</sup> / <sub>2</sub> - 15	15	11 <sup>3</sup> / <sub>4</sub> - 12	13
" 20 .....	.....	14 <sup>1</sup> / <sub>2</sub> - 15	..	11 <sup>3</sup> / <sub>4</sub> - 12	13
" 27 .....	14 <sup>1</sup> / <sub>2</sub> - ..	14 <sup>1</sup> / <sub>2</sub> - 15	15	11 <sup>3</sup> / <sub>4</sub> - 12	13
Mar. 6 .....	14 <sup>1</sup> / <sub>2</sub> - ..	14 - 14 <sup>1</sup> / <sub>4</sub>	15	11 <sup>3</sup> / <sub>4</sub> - 12	13 <sup>1</sup> / <sub>4</sub>
" 13 .....	14 <sup>1</sup> / <sub>2</sub> - ..	14 - 14 <sup>1</sup> / <sub>4</sub>	15	12 - 12 <sup>1</sup> / <sub>2</sub>	13 <sup>3</sup> / <sub>4</sub>
" 20 .....	13 - 13 <sup>1</sup> / <sub>2</sub>	14 - ..	15	12 - 12 <sup>1</sup> / <sub>2</sub>	13 <sup>3</sup> / <sub>4</sub>
" 27 .....	13 - 13 <sup>1</sup> / <sub>2</sub>	.. - 14	15	12 - 12 <sup>1</sup> / <sub>2</sub>	14

NOTE.—Boston and Chicago quotations taken from the *Elgin Dairy Report*, Elgin, Illinois; New York quotations from *The Producers' Price-Current*, New York; Montreal quotations from *The Gazette*, Montreal, and Toronto quotations from *The Weekly Globe*, Toronto.

STATEMENT showing Range of Wholesale Prices for Eggs at Boston, New York, Chicago, Montreal, Toronto and Halifax, each Month of 1910.

Month.	BOSTON.	NEW YORK.	CHICAGO.	MONTREAL.	TORONTO.	HALIFAX.
	"Firsts."	"Firsts."	"Firsts."	"Firsts."	"Firsts."	"Selects."
1910.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
January .....	30 - 35	33 <sup>1</sup> / <sub>2</sub> - 41	31 - 35	26 <sup>1</sup> / <sub>2</sub> - 29	26 - 28	28
February .....	26 - 34	24 <sup>1</sup> / <sub>2</sub> - 32	23 <sup>1</sup> / <sub>2</sub> - 29	26 <sup>1</sup> / <sub>2</sub> - 29	.. - 27	27
March .....	23 - 24 <sup>1</sup> / <sub>2</sub>	20 - 27	20 - 23	.....	26 - 27	23
April .....	21 <sup>1</sup> / <sub>2</sub> - 22 <sup>1</sup> / <sub>2</sub>	20 - 23	19 <sup>1</sup> / <sub>2</sub> - 21	19 - 20	21 - 22	18
May .....	21 - 22	19 <sup>1</sup> / <sub>2</sub> - 21 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>2</sub> - 19 <sup>1</sup> / <sub>2</sub>	20 - 22 <sup>1</sup> / <sub>2</sub>	20 - 22	17
June .....	19 <sup>1</sup> / <sub>2</sub> - 21	18 <sup>1</sup> / <sub>2</sub> - 21	17 <sup>1</sup> / <sub>2</sub> - 18 <sup>1</sup> / <sub>2</sub>	21 - 22 <sup>1</sup> / <sub>2</sub>	20 - 21	17
July .....	17 - 19	17 - 19	17 - 18 <sup>1</sup> / <sub>2</sub>	21 - 22	.. - 20	16 <sup>1</sup> / <sub>2</sub>
August .....	18 - 20 <sup>1</sup> / <sub>2</sub>	18 - 23	17 - 19	21 - 22	19 - 20	17
September .....	22 - 24 <sup>1</sup> / <sub>2</sub>	22 <sup>1</sup> / <sub>2</sub> - 25	19 <sup>1</sup> / <sub>2</sub> - 22	23 <sup>1</sup> / <sub>2</sub> - 25	20 - 24	20
October .....	24 - 29	24 - 28	21 <sup>1</sup> / <sub>2</sub> - 26 <sup>1</sup> / <sub>2</sub>	25 - 28	24 - 26	22
November .....	30 - 35	27 - 35	27 - 32	27 - 30	25 - 27	24
December .....	30 - 36	32 - 37	28 - 32	29 - 30	26 - 28	26



2 GEORGE V., A. 1912

STATEMENT showing Wholesale Prices for Eggs at Boston, New York, Chicago, Montreal, Toronto and Halifax, each week from January 9 to March 27, 1911.

Week.	BOSTON.	NEW YORK.	CHICAGO.	MONTREAL.	TORONTO.	HALIFAX.
	"Firsts."	"Firsts."	"Firsts."	"Selects."	"Held Fresh."	New Laid.
1911.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Jan. 9.....	32 - 34	34 - 35	30	32	28 - 30	.....
" 16.....	27 - 28	- 28	27	32	25 - 26	32 - 35
" 23.....	25 - 26	.....	23	30	26 - 27	.....
" 30.....	23 - 24	22½ - 23	23	28	.....	- - 28
Feb. 6.....	22 - 23	22 - 22½	22	28	22 - 23	- - 28
" 13.....	20½ - 21	.....	15	28	.....	.....
" 20.....	.....	.....	.....	23	25 - 26	.....
" 27.....	18 -	17 - 17½	16	23	17 - 18	- - 26
Mar. 6.....	18 -	.....	16½	23	14 - 15	.....
" 13.....	.....	17½ - 18	16	23	.....	- - 25
" 20.....	18 -	17 - 17½	15	22	.....	.....
" 27.....	16 -	15¾ - 16	14½	23	18 - 19	- - 22

NOTE.—Boston, New York and Chicago quotations taken from the *Elgin Dairy Report*, Elgin, Illinois; Montreal quotations from *The Gazette*, Montreal, and Toronto quotations from *The Weekly Sun*, Toronto.

STATEMENT showing range of Wholesale Prices for Dressed Poultry at New York, Montreal and Toronto each month of 1910.

Month.	NEW YORK.	MONTREAL.	TORONTO.
	"Chickens."	"Chickens."	"Chickens."
1910.	cts.	cts.	cts.
January.....	16 - 21	15 - 16	14 - 17
February.....	16 - 21	.....	15 - 18
March.....	16 - 17	.....	16 - 21
April.....	16 - 17	.....	.....
May.....	25 - 35	.....	.....
June.....	22 - 32	.....	.....
July.....	17 - 27	.....	16 - 18
August.....	14 - 19½	.....	- - 20
September.....	15 - 18	.....	13 - 18
October.....	13½ - 17	11 - 11½	.....
November.....	13 - 18	11 - 14	12 - 16
December.....	12 - 18	13 - 16	12½ - 16



SESSIONAL PAPER No. 15a

STATEMENT showing Wholesale Prices for *Dressed Poultry* at New York, Montreal and Toronto, each week from January 9 to March 27, 1911.

Week.	NEW YORK.	MONTREAL.	TORONTO.
	" Chickens." (Phila. Average Run).	" Chickens."	" Chickens."
1911.	cts.	cts.	cts.
January 9.....	16 - 17	12 - 15	16 - 17
" 16.....	16 - 17	11 - 13	15 - 18
" 23.....	17 - 18	11 - 13	.. - 17
" 30.....	17 - 18	11 - 13	16 - 18
February 6.....	17 - 18	13 - 15	17 - 18
" 13.....	17 - 18	11 - 13	15 - 16
" 20.....	17 - 18	11 - 13	16 - 17
" 27.....	17 - 18	11 - 13	17 - 19
March 6.....	17 - 18	11 - 13	16 - 20
" 13.....	17 - 18	.....	17 - 19
" 20.....	17 - 18	.....	.....
" 27.....	17 - 18	.....	18 - 19

NOTE.—New York quotations taken from the *Producers' Price-Current*; Montreal quotations from *The Gazette*, and Toronto quotations from *The Weekly Sun*.



2 GEORGE V., A. 1912

STATEMENT showing market quotations for Live Hogs at Chicago, Buffalo, Toronto and Montreal, each week from January 19, 1910, to March 30, 1911.

CHICAGO.			BUFFALO.			TORONTO.			MONTREAL.		
Date.	Live Hogs. — "Selected Bacons."		Date.	Live Hogs. — "Yorkers."		Date.	Live Hogs. — "Selected off Cars."		Date.	Live Hogs. — "Selected off Cars."	
1910.	\$ cts.	\$ cts.	1910.	\$ cts.	\$ cts.	1910.	\$ cts.	\$ cts.	1910.	\$ cts.	\$ cts.
Jan. 19....	8 45	8 50	Jan. 20....	8 90	9 10	Jan. 20....	8 90	9 00	Jan. 20....	9 00	9 25
" 26....	8 10	8 15	" 27....	8 75	8 85	" 27....	8 90		" 27....	9 00	
Feb. 2....	8 50	8 60	Feb. 3....	8 50	8 70	Feb. 2....	8 65		Feb. 3....	9 00	
" 9....	8 65	8 70	" 10....	8 85	8 90	" 9....	8 40		" 10....	9 00	9 50
" 16....	8 95	9 05	" 17....	9 15	9 25	" 16....	8 65		" 17....	9 25	
" 23....	9 50	9 55	" 24....	9 55	9 65	" 23....	8 90		" 24....	9 35	9 50
Mar. 2....	9 85	9 95	Mar. 3....	9 75	9 95	Mar. 2....	8 90		Mar. 3....	9 60	9 70
" 9....	10 50	10 55	" 10....			" 9....	9 50		" 10....	9 85	9 95
" 16....	10 65	10 70	" 17....	10 75	10 95	" 16....	9 75		" 17....	10 20	10 35
" 23....	10 75	10 85	" 24....	10 85	11 15	" 23....	10 00		" 24....	10 75	
" 30....	10 70	10 80	" 31....	10 50	11 20	" 30....	10 15		" 31....	10 75	
Apr. 6....	10 50	10 60	Apr. 7....	10 90	11 20	Apr. 6....	9 90		Apr. 7....	10 40	10 50
" 13....	10 05	10 15	" 14....	10 85	10 90	" 13....	9 65		" 14....	10 00	10 50
" 20....	9 10	9 25	" 21....	10 25	10 30	" 20....	9 50		" 21....	10 20	10 35
" 27....	9 40	9 45	" 28....	9 65	9 80	" 27....	9 10		" 28....	9 90	10 15
May 4....	9 40	9 50	May 5....	9 90	10 10	May 4....	9 25		May 5....	9 75	
" 11....	9 65	9 80	" 12....	10 15	10 25	" 11....	9 40		" 12....	10 00	10 25
" 18....	9 70	9 80	" 19....	10 05	10 20	" 18....	9 75	9 90	" 19....	10 25	10 50
" 25....	9 45	9 50	" 26....	10 05	10 20	" 25....	9 90		" 26....	10 50	10 60
June 1....	9 60	9 65	June 2....	9 75	9 85	June 1....	10 00		June 2....	10 25	10 50
" 8....	9 60	9 65	" 9....	9 70	9 80	" 8....	9 50		" 9....	10 00	
" 15....	9 65	9 70	" 16....	9 75	10 10	" 15....	9 50		" 16....	10 00	
" 22....	9 45	9 55	" 23....	9 70	9 85	" 22....	9 50		" 23....	9 75	10 00
" 29....	9 30	9 40	" 30....	9 75	10 00	" 29....	9 25		" 30....	9 50	9 75
July 6....	9 45	9 60	July 7....	9 55	9 75	July 6....	9 25		July 7....	9 50	9 75
" 13....	9 00	9 30	" 14....	9 55	10 00	" 13....	9 25	9 50	" 14....	9 60	9 75
" 20....	8 80	9 00	" 21....	9 50	9 80	" 20....	9 60	9 75	" 21....	10 00	10 20
" 27....	8 90	9 05	" 28....	9 25	9 60	" 27....	9 75	9 90	" 28....	10 50	10 75
Aug. 3....	8 70	8 90	Aug. 4....	9 20	9 65	Aug. 3....	9 60		Aug. 4....	10 25	10 50
" 10....	8 80	9 00	" 11....	9 30	9 50	" 10....	8 85		" 11....	9 50	9 60
" 17....	8 80	9 00	" 18....	9 25	9 65	" 17....	8 75		" 18....	9 25	9 50
" 24....	9 20	9 35	" 25....	9 15	9 30	" 24....	9 00		" 25....	9 25	9 50
" 31....	9 60	9 70	Sept. 1....	9 50	9 55	" 31....	9 00		Sept. 1....	9 25	9 50
Sept. 7....	9 70	9 90	" 8....	9 90	10 10	Sept. 7....	9 25		" 8....	9 25	
" 14....	9 20	9 55	" 15....	9 90	10 10	" 14....	9 25		" 15....	9 25	
" 21....	9 20	9 30	" 22....	9 90	10 05	" 21....	9 00	9 25	" 22....	9 25	
" 28....	9 20	9 35	" 29....	9 60	9 90	" 28....	9 00	9 25	" 29....	9 25	9 40
Oct. 5....	8 90	9 10	Oct. 6....	9 10	9 25	Oct. 5....	9 00		Oct. 6....	9 00	9 25
" 12....	9 00	9 25	" 13....	9 50	9 55	" 12....	8 75		" 13....	9 00	9 25
" 19....	9 25	9 60	" 20....	9 30	9 40	" 19....	8 55		" 20....	8 25	
" 26....	8 80	9 10	" 27....	9 20	9 25	" 26....	7 85		" 27....	7 50	7 75
Nov. 2....	8 40	8 65	Nov. 3....	9 05	9 10	Nov. 2....	7 40	7 65	Nov. 3....	7 50	8 00
" 9....	7 80	7 95	" 10....	8 30	8 40	" 9....	7 25	7 35	" 10....	7 00	7 25
" 16....	7 30	7 45	" 17....	8 20	8 30	" 16....	7 15		" 17....	7 00	7 25
" 23....	6 90	7 10	" 24....	7 40	7 50	" 23....	7 25		" 24....	7 10	7 25
" 30....	7 10	7 20	Dec. 1....	7 25	7 35	" 30....	7 25	7 35	Dec. 1....	7 10	7 25
Dec. 7....	7 50	7 60	" 8....	7 80	8 00	Dec. 7....	7 00		" 8....	7 10	7 25
" 14....			" 15....	8 05	8 10	" 14....	7 00		" 16....	7 00	7 10
" 21....	7 85	7 95	" 22....	7 90	8 10	" 21....	7 00	7 10	" 23....	7 00	7 10
" 28....	7 80	7 90	" 29....	8 15	8 20	" 28....	7 00		" 30....	7 80	7 95
1911.			1911.			1911.			1911.		
Jan. 4....	8 15	8 25	Jan. 5....	8 30	8 40	Jan. 4....	7 40		Jan. 6....	7 85	8 20
" 11....	7 85	7 90	" 12....	8 50	8 75	" 11....	7 65		" 13....	7 75	8 20
" 18....	8 00	8 10	" 19....	8 35		" 18....	7 85		" 20....	8 00	8 10
" 25....	7 80	7 85	" 26....	8 45	8 50	" 25....	7 65		" 27....	8 10	8 25
Feb. 1....	7 65	7 85	Feb. 2....	8 40	8 50	Feb. 1....	7 60		Feb. 3....	7 90	8 00
" 8....	7 70	7 80	" 9....	8 10	8 35	" 8....	7 65		" 10....	7 85	8 00
" 15....	7 40	7 50	" 16....	8 15	8 40	" 15....	7 65		" 17....	8 00	
" 22....	7 50	7 65	" 23....	8 00	8 10	" 22....	7 40		" 24....	7 65	8 00
Mar. 1....	7 25	7 35	Mar. 1....	7 85	8 00	Mar. 1....	7 25		Mar. 1....	7 50	7 75
" 8....	7 10	7 15	" 8....	7 50	7 55	" 8....	7 25		" 8....	7 40	7 50
" 15....	7 00	7 15	" 15....	7 60	7 70	" 15....	7 25		" 15....	7 25	7 30
" 22....	7 00	7 20	" 22....	7 50	7 60	" 22....	7 25		" 22....	7 40	7 50
" 29....	7 00	7 15	" 30....	7 25	7 40	" 29....	7 05		" 29....	7 40	

NOTE.—Prices taken from the following sources:—Chicago, from *The Breeders' Gazette*; Buffalo, from *The Farmer's Advocate*; Toronto, from *The Weekly Sun*, and Montreal, from *The Journal of Commerce*



## SESSIONAL PAPER No. 15a

STATEMENT showing Market Quotations for Live Cattle at Winnipeg, Chicago and Toronto, each fortnight from January 5 to December 5, 1910.

Date.	WINNIPEG.		CHICAGO.		TORONTO.	
	"Choice Export Steers."	"Choice Butcher Steers."	Date.	"Steers."	"Choice Export Steers."	"Prime Butcher Steers."
1910.	\$ cts. \$ cts.	\$ cts. \$ cts.	1910.	\$ cts. \$ cts.	\$ cts. \$ cts.	\$ cts. \$ cts.
Jan. 5.....	4 10 - 4 25	3 25 - 3 75	Jan. 5.....	5 00 - 8 00	5 75 - 6 00	.....
" 20.....	4 25 - 4 50	3 50 - 4 25	" 19.....	4 00 - 7 75	5 75 - 6 00	5 75 - 6 35
Feb. 5.....	.....	5 00 - 5 25	Feb. 2.....	4 75 - 8 40	5 85 - 6 10	5 75 - 6 05
" 21.....	.....	4 50 - 5 00	" 16.....	4 75 - 8 00	6 00 - 6 20	5 75 - 6 00
Mar. 5.....	.....	4 50 - 4 75	Mar. 4.....	5 30 - 8 10	6 25 - 6 50	6 00 - 6 25
" 21.....	.....	4 50 - 5 00	" 18.....	5 80 - 8 40	6 00 - 6 90	6 85 - 7 00
Apr. 5.....	.....	4 75 - 5 65	Apr. 1.....	6 10 - 8 75	6 85 - 7 60	6 50 - 6 90
" 20.....	.....	5 00 - 6 00	" 15.....	6 25 - 8 65	6 90 - 8 10	6 60 - 7 00
May 5.....	5 75 - 6 00	5 50 - 6 00	" 29.....	6 25 - 8 50	7 25 - 7 60	7 10 - 7 25
" 20.....	5 50 - 6 50	5 75 - 6 00	May 13.....	6 25 - 8 40	7 00 - 7 50	6 75 - 7 00
June 6.....	5 75 - 6 00	5 50 - 6 00	" 20.....	6 25 - 8 60	7 00 - 7 50	6 75 - 7 00
" 20.....	5 75 - 6 00	5 50 - 6 00	June 10.....	6 25 - 8 60	7 00 - 7 50	6 75 - 7 10
July 5.....	5 75 - 6 00	5 35 - 5 75	" 24.....	5 70 - 8 75	7 25 - 7 75	6 50 - 7 00
" 20.....	5 50 - 5 75	.....	July 8.....	6 25 - 8 50	6 90 - 7 15	6 25 - 6 75
Aug. 5.....	5 00 - 5 25	4 75 - 5 00	" 22.....	5 20 - 8 50	6 90 - 7 25	6 75 - 6 85
" 20.....	4 50 - 5 00	..... - 4 50	Aug. 5.....	4 65 - 8 20	6 70 - 6 90	6 25 - 6 50
Sept. 5.....	5 00 - 5 25	.....	" 19.....	4 50 - 8 20	6 25 - 6 85	6 25 - 6 50
" 20.....	4 75 - 5 00	4 50 - 4 75	Sept. 2.....	4 90 - 8 40	6 25 - 6 50	6 00 - 6 25
Oct. 5.....	4 50 - 4 75	4 25 - 4 50	" 16.....	4 75 - 8 20	6 25 - 6 75	6 00 - 6 40
" 20.....	4 50 - 4 75	4 00 - 4 25	" 30.....	4 75 - 8 20	6 25 - 7 00	6 00 - 6 25
Nov. 5.....	4 50 - 4 75	4 00 - 4 25	Oct. 14.....	4 60 - 8 00	6 00 - 6 50	4 75 - 5 75
" 21.....	4 00 - 4 50	3 50 - 3 75	" 28.....	4 60 - 7 80	6 00 - 6 40	5 50 - 6 00
Dec 5.....	5 00 - 5 25	4 65 - 4 75	Nov. 11.....	4 50 - 7 60	5 75 - 6 15	5 25 - 6 00
			" 18.....	4 50 - 7 40	5 75 - 6 25	5 25 - 5 75
			Dec. 2.....	4 50 - 7 50	5 75 - 6 25	5 25 - 6 00

Winnipeg prices taken from *Nor-west Farmer*, other quotations from *Canadian Farm*,

CONTINUATION of statement showing Market Quotations for Live Cattle at Winnipeg, Chicago and Toronto each week from December 9, 1910, to February 24, 1911.

(From *Canadian Farm*).

Date.	WINNIPEG.		CHICAGO.	TORONTO.	
	"Choice Export Steers."	"Prime Butcher Steers."	Prime Steers.	"Choice Export Steers."	"Prime Butcher Steers."
1910.	\$ cts. \$ cts.	\$ cts. \$ cts.	\$ cts. \$ cts.	\$ cts. \$ cts.	\$ cts. \$ cts.
Dec. 9.....	.....	.....	4 50 - 7 25	5 75 - 6 10	5 50 - 6 00
" 16.....	.....	.....	4 50 - 7 10	5 75 - 6 25	5 50 - 7 10
" 23.....	.....	.....	4 50 - 7 55	5 75 - 6 25	6 00 - 6 40
" 30.....	.....	.....	4 50 - 6 30	5 75 - 5 80	5 50 - 5 85
1911.					
Jan. 6.....	5 00 - 5 25	4 25 - 4 50	6 75 - 7 00	5 25 - 6 00	5 50 - 5 85
" 13.....	5 00 - 5 25	4 25 - 4 50	6 75 - 7 10	5 25 - 6 25	5 50 - 6 00
" 20.....	5 00 - 5 25	4 75 - 5 00	6 50 - 6 75	6 00 - 6 25	5 75 - 6 00
" 27.....	.....	.....	6 75 - 7 10	6 00 - 6 35	5 80 - 6 25
Feb. 3.....	.....	4 25 - 4 50	6 75 - 7 50	6 00 - 6 15	5 80 - 6 00
" 10.....	.....	5 25 - 5 50	6 65 - 6 80	6 00 - 6 25	5 80 - 6 15
" 17.....	.....	4 25 - 5 25	6 65 - 6 80	6 00 - 6 35	5 80 - 6 25
" 24.....	.....	5 00 - 5 50	5 25 - 6 75	6 00 - 6 25	5 80 - 6 15
March 3.....	.....	5 75 - 6 00	5 25 - 6 90	5 75 - 5 85	5 80 - 6 10
" 10.....	.....	5 75 - 6 00	5 25 - 6 90	5 75 - 5 90	5 80 - 5 90
" 17.....	.....	5 25 - 5 50	5 25 - 6 85	5 85 - 6 15	5 80 - 6 00
" 24.....	.....	5 25 - 6 00	5 25 - 6 85	5 85 - 6 00	5 80 - 6 00
" 31.....	.....	5 25 - 6 25	5 25 - 6 85	5 85 - 6 10	5 80 - 6 00



2 GEORGE V., A. 1912

STATEMENT showing Market Quotations for Live Cattle at New York, Buffalo and Montreal, each fortnight from January 5 to December 2, 1910, and each week from January 6 to March 31, 1911.

(From *Canadian Farm.*)

Date.	NEW YORK.		BUFFALO.		MONTREAL.	
	"Steers".		"Export Steers".	"Prime Steers".	"Prime Butcher Steers".	
1910.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Jan. 5.....			5 85 - 6 40	6 00 - 7 50	5 00 - 5 75	
" 19.....			6 00 - 6 50	6 65 - 7 00	5 25 - 6 25	
Feb. 2.....	4 65 - 6 75		5 50 - 6 00	6 25 - 6 50	5 50 - 5 85	
" 16.....	5 75 - 7 00		5 75 - 6 50	6 60 - 7 00	6 25 - 6 50	
Mar. 4.....	5 75 - 7 50		6 00 - 6 65	6 75 - 7 25	6 00 - 6 25	
" 18.....	4 80 - 7 65		6 50 - 7 00	7 25 - 7 90	6 00 - 6 65	
Apr. 1.....	6 00 - 8 25		6 75 - 7 50	7 75 - 8 25	6 60 - 6 90	
" 15.....	7 00 - 8 00		7 00 - 7 75	8 00 - 8 65	6 60 - 7 00	
" 29.....	5 50 - 8 50		7 00 - 7 75	8 00 - 8 40	7 75 - 8 00	
May 13.....	7 00 - 8 50		7 00 - 7 75	7 75 - 8 13	7 10 - 7 30	
" 20.....	7 00 - 8 15		7 00 - 7 75	7 35 - 8 40	7 00 - 7 25	
June 10.....	8 60 - 8 65		7 25 - 8 00	8 25 - 8 60	7 25 - 7 50	
" 24.....	6 25 - 8 60		6 75 - 8 00	8 25 - 8 50	6 75 - 7 75	
July 8.....	6 25 - 8 10		6 50 - 7 50	7 75 - 8 00	6 50 - 6 75	
" 22.....	5 75 - 7 75		6 75 - 7 50	7 65 - 8 00	6 75 - 6 90	
Aug. 5.....	4 65 - 7 25		5 75 - 7 00	7 25 - 7 75	6 50 - 6 60	
" 19.....	4 30 - 7 35		6 00 - 7 00	7 25 - 7 60	6 00 - 6 25	
Sept. 2.....	4 50 - 7 35		6 25 - 7 00	7 25 - 7 50	6 00 - 6 25	
" 16.....	4 50 - 7 25		5 75 - 6 75	7 00 - 7 50	6 00 - 6 25	
" 30.....	5 10 - 7 15		7 00 - 7 50	7 25 - 7 75	5 50 - 6 10	
Oct. 14.....	4 60 - 6 95		6 60 - 6 75	7 25 - 7 50	5 50 - 5 75	
" 28.....	4 60 - 6 95		5 85 - 6 50	7 00 - 7 25	5 50 - 6 00	
Nov. 11.....	4 60 - 6 85		5 85 - 6 50	6 75 - 7 00	5 50 - 6 00	
" 18.....	4 60 - 6 30		5 85 - 6 50	6 75 - 7 00	5 10 - 5 60	
Dec. 2.....	4 60 - 6 70		5 50 - 6 25	6 40 - 6 75	5 50 - 5 65	
" 9.....	4 60 - 6 70		5 50 - 6 25	6 40 - 6 75	5 50 - 5 65	
" 16.....	4 60 - 6 70		5 50 - 6 25	6 40 - 6 75	5 65 - 6 00	
" 23.....	4 60 - 6 50		5 50 - 6 25	6 40 - 6 75	5 65 - 6 00	
" 31.....	4 60 - 6 50		5 50 - 6 35	6 40 - 6 75	5 65 - 6 00	
1911.						
Jan. 6.....	4 60 - 6 50		5 50 - 6 35	6 40 - 6 75	5 75 - 6 00	
" 13.....	5 60 - 6 40			6 50 - 6 75	5 75 - 6 25	
" 20.....	5 60 - 6 40			6 50 - 6 75	5 75 - 6 25	
" 27.....	5 60 - 6 40			6 50 - 6 75	6 00 - 6 50	
Feb. 3.....	5 60 - 6 40			6 50 - 6 75	6 00 - 6 50	
" 10.....	5 60 - 6 40			6 50 - 6 75	6 00 - 6 50	
" 17.....	5 60 - 6 40			6 50 - 6 75	6 00 - 6 50	
" 24.....	6 65 - 6 80				6 00 - 6 50	
Mar. 3.....	6 65 - 6 85			6 50 - 6 75	6 00 - 6 50	
" 10.....	6 65 - 7 00			6 25 - 6 60	6 00 - 6 50	
" 17.....	6 65 - 7 00			No quotation.	6 50 - 6 75	
" 24.....	6 50 - 6 65			"	6 25 - 6 50	
" 31.....	6 50 - 6 65			6 40 - 6 60	6 25 - 6 50	



## SESSIONAL PAPER No. 15a

STATEMENT showing Price of Cash Wheat at Minneapolis, Chicago, Winnipeg and Liverpool on the same day each week from July 5, 1910 to March 27, 1911.

Date.	MINNEAPOLIS.	CHICAGO.	WINNIPEG.	LIVERPOOL.
	No. 1 Northern, Per Bushel.	No. 1 Northern, Per Bushel.	No. 1 Northern, Per Bushel.	No. 1 Northern, (Manitoba) Per Bushel.
1910.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
July 5.....	1 16 $\frac{1}{4}$	1 14 $\frac{1}{4}$	1 02 $\frac{3}{4}$	1 10
" 12.....	1 18 $\frac{1}{4}$	1 21 $\frac{1}{2}$	1 09 $\frac{1}{4}$	1 14
" 19.....	1 24 $\frac{1}{4}$	1 26	1 14 $\frac{1}{4}$	1 27
" 26.....	1 26 $\frac{1}{4}$	1 26 $\frac{3}{4}$	1 13 $\frac{1}{4}$	1 28
Aug. 2.....	1 16 $\frac{1}{4}$	.....	.....	1 22
" 9.....	1 19	1 21 $\frac{3}{4}$	1 08 $\frac{1}{2}$	1 21
" 16.....	1 12 $\frac{7}{8}$	1 22 $\frac{1}{2}$	.....	1 26
" 23.....	1 12 $\frac{7}{8}$	1 21	1 08	1 24
" 30.....	1 13	.....	1 08 $\frac{3}{4}$	1 24
Sept. 6.....	1 12 $\frac{1}{4}$	1 16	1 05	1 25
" 13.....	1 11 $\frac{1}{4}$	1 14 $\frac{1}{4}$	1 02 $\frac{1}{2}$	1 22
" 20.....	1 11 $\frac{1}{4}$	1 15	1 01	1 22
" 27.....	1 10 $\frac{3}{8}$	1 11 $\frac{1}{2}$	0 99	1 21
Oct. 4.....	1 10	1 12	.....	1 19
" 11.....	1 08 $\frac{1}{2}$	1 12 $\frac{1}{4}$	0 97 $\frac{1}{4}$	1 19
" 18.....	1 04 $\frac{1}{2}$	1 07	.....	1 17
" 25.....	1 04 $\frac{1}{4}$	1 06	0 94 $\frac{1}{4}$	1 15
Nov. 1.....	1 01 $\frac{1}{2}$	.....	.....	1 11
" 8.....	.....	.....	0 90	1 04
" 15.....	1 06 $\frac{1}{4}$	1 04 $\frac{3}{4}$	.....	1 08
" 22.....	1 05 $\frac{1}{8}$	1 07	0 94 $\frac{3}{4}$	1 12
" 29.....	1 02 $\frac{3}{8}$	1 05 $\frac{1}{2}$	0 90	1 09
Dec. 6.....	1 04 $\frac{1}{2}$	1 08	0 91 $\frac{1}{4}$	1 10
" 13.....	1 02 $\frac{1}{4}$	.....	0 89 $\frac{1}{2}$	1 09
" 20.....	1 02	1 05 $\frac{1}{8}$	0 90	1 08
" 27.....	1 01 $\frac{1}{2}$	1 05	0 89 $\frac{3}{4}$	1 08
1911.				
Jan. 3.....	1 06 $\frac{3}{4}$	1 06 $\frac{1}{2}$	0 92 $\frac{1}{2}$	1 12
" 10.....	1 08 $\frac{1}{2}$	1 09	0 95	1 12
" 17.....	1 07 $\frac{1}{2}$	1 09	0 95 $\frac{1}{2}$	1 12
" 24.....	1 04 $\frac{1}{2}$	1 08	0 94	1 13
" 31.....	1 03 $\frac{1}{4}$	1 05 $\frac{3}{4}$	0 92	1 12
Feb. 7.....	1 00 $\frac{1}{4}$	1 01 $\frac{1}{2}$	0 92	1 13
" 14.....	0 98 $\frac{1}{2}$	0 98 $\frac{3}{4}$	0 90 $\frac{3}{4}$	1 13
" 21.....	0 96 $\frac{1}{4}$	0 99	0 88 $\frac{1}{4}$	1 13
" 28.....	0 96	.....	.....	1 12
Mar. 7.....	0 98 $\frac{5}{8}$	1 00	0 88 $\frac{3}{4}$	1 11
" 14.....	0 98 $\frac{1}{4}$	0 99 $\frac{1}{2}$	0 90	1 11
" 20.....	0 98 $\frac{1}{2}$	1 00 $\frac{1}{2}$	0 89 $\frac{3}{4}$	.....
" 27.....	0 94 $\frac{1}{4}$	0 9 $\frac{1}{2}$	0 89 $\frac{3}{4}$	.....

NOTE.—Prices for first three markets taken from the *Weekly Northwestern Miller*; Liverpool prices from *Broomhall's Corn Trade News*.



THE FOLLOWING STATEMENT shows the Wholesale Price of *Malting Barley* at Minneapolis, Buffalo, Milwaukee, Toronto and Winnipeg each week from July 6, 1910, to March 29, 1911. (Quotations from *The Northwestern Miller*, Minneapolis, and *The Grain Growers' Guide*, Winnipeg).

		MINNEAPOLIS.	BUFFALO.	MILWAUKEE.	TORONTO	WINNIPEG.
Date.		Best Malting. per bushel.	Best Malting. per bushel.	No. 2. per bushel.	No. 2. per bushel.	*No. 3. per bushel.
1910.		cts.	cts.	cts.	cts.	cts.
July	6.....	62	64 - 69	66½ - 67	51 - 52	45
"	13.....	68	68 - 70	67 - 72	51 - 52	48½
"	20.....	67	75 - 77	75 - 76	51 - 52	52
"	27.....	65	70 - 74	70 - 76	51 - 52	50
August	3.....	64	.....	65 - 68	51 - 52	No Quotat.
"	10.....	69	65 - 70	67 - 69	51 - 52	"
"	17.....	73	70 - 76	70 - 73	51 - 52	"
"	24.....	69	73 - 77	75 - 76	52 - 54	"
"	31.....	68	72 - 77	72 - 74	52 - 54	"
September	7.....	67	73 - 75	70 - 73½	52 - 54	46½ - 47
"	14.....	70	71 - 73	69 - 72	52 - 54	46
"	21.....	71	74 - 78	71 - 74	48 - 50	46½
"	28.....	68	73 - 78	72 - 74	55 - 56	47
October	5.....	70	72 - 77	70½ - 72½	55 - 56	47
"	12.....	72	76 - 80	70½ - 75	55 - 60	47½
"	19.....	71	78 - 82	73½ - 76	53 - 56	46½
"	26.....	68½	76 - 80	72 - 75	53 - 56	46¾
November	2.....	71	75 - 76	71 - 75	53 - 56	43
"	9.....	75	77 - 82	72½ - 76½	55 - 60	46
"	16.....	75½	81 - 85	79 - 81½	55 - 60	47
"	23.....	76	81 - 82	77½ - 82	57 - 62	47
"	30.....	75	.....	76 - 80½	56 - 60	.....
December	7.....	83½	82 - 85	76½ - 83	58 - 62	46
"	14.....	80	.....	87½ - 90	58 - 62	46½
"	21.....	80	86 - 90	84 - 88½	58 - 60	47
"	28.....	79	87 - 93	83 - 85½	58 - 60	.....
1911.						
January	4.....	88	93 - 97	80 - 86	58 - 60	47
"	11.....	91	97 - 100	87 - 92	58 - 60	49
"	18.....	90	97 - 100	92 - 100	58 - 60	50
"	25.....	90	94 - 98	91 - 97	58 - 60	49½
February	1.....	87	95 - 100	89½ - 94	60 - 62	49½
"	8.....	84	88 - 95	90 - 92	60 - 62	49½
"	15.....	94	91 - 95	85 - 88	65 - 68	57
"	22.....	.....	93 - 96	92 - 95	65 - 70	57
March	1.....	92	94 - 100	89 - 96	65 - 70	57
"	8.....	90	98 - 104	92½ - 97	65 - 70	No Quotat.
"	15.....	93	96 - 102	97 - ..	63 - 66	"
"	22.....	99	96 - 102	97 - 100½	63 - 66	58
"	29.....	107	111 - 113	100½ - 112	60 - 63	.....

\* Quotations in Store Fort William and Port Arthur.

SUMMARY.

Based on the above quotations the average price in each market for the period July 6, 1910, to April 12, 1911, was as follows:—

Minneapolis.. . . . .	78.6 cents per bushel.
Buffalo.. . . . .	85.7 " " "
Milwaukee.. . . . .	82.4 " " "
Toronto.. . . . .	57.8 " " "
Winnipeg.. . . . .	50.0 " " "



SESSIONAL PAPER No. 15a

## THE EXPORT BUTTER TRADE.

In the last four fiscal years the exports of butter have been as follows:—

Year ended March 31.	Lbs.	Value.
1908 .....	4,786,954	\$1,068,703
1909 .....	6,326,355	1,521,436
1910 .....	4,615,380	1,010,274
1911 .....	3,142,682	744,288

In August, 1909, owing to a reduction in the United States tariff a new export trade developed in Canada, namely, the shipping of cream to the United States, and by the close of the fiscal year ended March 31, 1910, the total export of this article amounted to 2,362,220 pounds, valued at \$244,442. In the year ended March 31, 1911, the exports totalled 18,238,210 pounds, valued at \$1,714,528.

If we add the value of cream shipped to the United States to the total of butter exported, we get a total export value of \$1,254,716 for 1910, and of \$2,458,816 for 1911.

The following table gives the comparative temperatures of butter for the past six years when delivered to the steamers at Montreal and unloaded at the port of discharge in Great Britain:—

	No. of Pkgs. Tested.	Average Temperature at Montreal.	Average Temperature at Port of Discharge.	Average Increase in Temperature during Voyage.	Average Reduction in Temperature during Voyage.
		Deg.	Deg.	Deg.	Deg.
<b>Montreal to Liverpool—</b>					
Season 1905.....	843	39.3	24.9	.....	14.4
" 1906.....	456	39.2	21.4	.....	17.8
" 1907.....	183	33.7	23.1	.....	10.6
" 1908.....	86	37.5	25.0	.....	12.5
" 1909.....	43	37.6	25.7	.....	11.9
" 1910.....	58	35.7	22.1	.....	13.6
<b>Montreal to London—</b>					
Season 1905.....	859	40.2	26.6	.....	13.6
" 1906.....	527	41.7	20.5	.....	21.2
" 1907.....	217	36.2	15.3	.....	20.9
" 1908.....	153	39.6	18.2	.....	21.4
" 1909.....	87	36.3	22.9	.....	13.4
" 1910.....	46	33.2	17.2	.....	16.0
<b>Montreal to Bristol—</b>					
Season 1905.....	607	36.9	23.9	.....	13.0
" 1906.....	361	36.9	23.9	.....	13.0
" 1907.....	186	35.4	22.9	.....	12.5
" 1908.....	226	35.3	23.5	.....	11.8
" 1909.....	148	31.5	21.3	.....	10.2
" 1910.....	207	29.5	21.8	.....	7.7
<b>Montreal to Glasgow—</b>					
Season 1905.....	403	35.8	28.7	.....	7.1
" 1906.....	374	35.0	24.1	.....	10.9
" 1907.....	183	35.9	19.2	.....	16.7
" 1908.....	75	35.0	23.9	.....	11.1
" 1909.....	79	32.4	22.7	.....	9.7
" 1910.....	35	31.9	23.7	.....	8.2
<b>Montreal to Manchester—</b>					
Season 1905.....	87	34.4	30.4	.....	4.0
" 1906.....	33	41.2	38.8	.....	2.4
" 1907.....	7	40.9	34.0	.....	6.9
" 1908.....	.....	.....	.....	.....	.....
" 1909.....	11	28.8	33.5	4.7	.....
" 1910.....	5	35.2	32.0	.....	3.2



## THE EXPORT CHEESE TRADE.

The following table shows the exports of cheese for the years 1904 to 1911, inclusive.

Year ended March 31.	Lbs.	Value.
1904 .....	242,432,366	\$25,975,998
1905 .....	216,080,606	19,969,363
1906 .....	214,438,960	23,679,419
1907 .....	213,614,643	26,160,856
1908 .....	189,710,463	22,887,237
1909 .....	164,907,139	20,384,666
1910 .....	180,859,886	21,607,692
1911 .....	181,895,724	20,739,507

The reports of the cargo inspectors, which will be found in the next section, show that the quality of Canadian cheese continues to give satisfaction in Great Britain; but there are three complaints which are general, as follows:—

First—The large proportion of Canadian cheese boxes which arrive badly broken caused by the use of (a) mis-fitting boxes, and (b) cheap, badly made boxes the veneer of which is necessarily poor;

Second—Incorrect weights;

Third—Illegible marking of weights on boxes due to the use of lead pencil instead of stencil.

The broken boxes come mostly from sections in Quebec and Ontario where the small, poorly equipped and struggling factories are located. Prince Edward Island boxes are strong and well made and we seldom hear of any serious breakage in shipments from that province; and the same may be said of the boxes from the more advanced districts in Ontario.

Trouble No. 2 may be ascribed either to carelessness in weighing at the factory, to the use of incorrect scales, or to downright fraud on the part of the weigher.

Number 3 although a small matter in itself is a prolific source of trouble to shippers and importers and necessitates a lot of re-weighing to settle disputes caused by errors in calling off the weights.

It seems to me that a good deal might be done to improve conditions under all three heads if it was made part of the duties of the factory instructors in Ontario and Quebec to show makers how to box their cheese properly, to note and report if the factory scales are in good condition, or if they are old, rusty and inaccurate, and to point out to makers the importance of neatly stencilling the weight at the proper place on the box.



SESSIONAL PAPER No. 15a

THE EXPORT FRUIT TRADE.

The following table shows the quantity and value of apples exported from Canada in the years ended March 31, 1904, to 1911, inclusive:—

Year ended March 31.	Barrels.	Value.
		\$
1904.....	1,577,285	4,529,500
1905.....	977,488	2,551,474
1906.....	1,280,789	4,217,704
1907.....	998,618	2,702,623
1908.....	1,629,400	4,823,645
1909.....	1,092,090	2,804,282
1910.....	1,604,477	4,417,926
1911.....	523,658	1,753,884

The large reduction in the exports was caused, of course, by an exceptionally light crop, and by increased shipments to the western provinces. Prices ruled high in Great Britain throughout the season and, as a consequence, a larger percentage of lower grades was shipped from this country. At the close of the season, however, general satisfaction was expressed by receivers regarding the grading and packing of Canadian apples. A feature of the Old Country markets was the relatively large quantity of boxed apples from Virginia and from the far western states of California, Oregon and Washington. Some very fine specimens of Canadian Spies in boxes were sold on the Glasgow market during the late fall and winter, one lot in particular realizing higher prices than a parcel of U. S. Newtown Pippins sold at the same time and place.

SHIPMENTS FROM HALIFAX AND ST. JOHN, 1910-11.

The total quantity of apples shipped from the port of Halifax during the season 1910-11 was as follows:—

Shipped to—	Barrels.	Half Barrels.	Boxes.
London.....	209,472	418	2,212
Liverpool.....	20,223	29	385
Newfoundland.....	10,948	41	2
Bristol.....	2,365	.....	.....
South Africa.....	2,181	396	562
West Indies.....	1,324	.....	.....
Total.....	246,513	884	3,161

SHIPMENTS FROM ST. JOHN, 1910-11.

Shipped to—	Barrels.	Boxes.
Liverpool.....	1,400	800
London.....	3,200	1,260
Glasgow.....	1,850	900
Manchester.....	1,100	.....
Total.....	7,550	2,960



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## LETTERS FROM IMPORTERS IN GREAT BRITAIN.

The cargo inspectors in Great Britain have transmitted to this office a large number of letters which they received from importers of cheese, butter, fruit, &c. In these communications the writers were good enough to state their views regarding the quality and condition of the Canadian products handled by them during the year and to point out where improvement might be made. We are always glad to get these letters which receive our most careful consideration. In former reports we have published a few of the more representative letters, but this year we are not able to do so owing to lack of space.

## REPORTS OF CARGO INSPECTORS IN GREAT BRITAIN.

Following are the annual reports of the cargo inspectors employed under the direction of this branch at Liverpool, Manchester, Glasgow, Bristol and London.

## REPORT OF THE CHIEF CARGO INSPECTOR FOR GREAT BRITAIN (MR. A. W. GRINDLEY).

LIVERPOOL, March 31, 1911.

I have the honour to submit my report as Chief Cargo Inspector for Great Britain, for the year ended March 31, 1911. Besides my own, you will please find attached annual reports from:—

Mr. Wm. Carter, Cargo Inspector for ports of Liverpool and Manchester.

Mr. Thos. E. Davis, Cargo Inspector for port of London.

Mr. James A. Findlay, Cargo Inspector for port of Glasgow.

Captain H. E. Shallis, Cargo Inspector for port of Bristol.

As the annual reports of the cargo inspectors, and the numerous letters from the principal importers of butter, cheese, fruit, &c., fully describe the various complaints in connection with Canadian food products and indicate where improvement can be made, and as I have practically covered the same ground from year to year, I have thought it well this year to make a report showing the imports of certain specified articles into the ports of London, Liverpool, Manchester, Bristol and Glasgow, and the proportion of these products which were of Canadian origin.



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STATEMENT of Imports of certain specified articles from all countries into the ports of London (including Queenborough), Liverpool, Manchester, Bristol and Glasgow in the year 1910 and the proportion received from Canada.

Ports.	Cheese.		Butter. (Including Milk Blended)		Bacon.		Eggs.		Apples (Raw).	
	Cwts.	£	Cwts.	£	Cwts.	£	Great Hundreds.	£	Cwts.	£
London .....	1,270,178	3,577,100	1,504,784	8,019,610	405,241	1,379,038	5,769,423	2,182,464	969,757	720,119
Liverpool... ..	413,579	1,141,834	36,329	204,617	1,212,735	4,102,268	460,197	158,674	1,170,256	729,661
Manchester. ....	65,329	171,680	143	686	27,203	94,959	91,334	25,677	122,259	77,063
Bristol.. ....	364,412	981,394	11,244	60,799	55,679	189,024	40,240	14,498	19,958	12,974
Glasgow.....	60,702	173,110	682	3,446	113,086	405,988	2,172	795	484,846	310,949

CONSIGNED FROM CANADA ONLY.

London .....	719,842	2,003,989	2,924	16,041	79,931	277,482	.....	.....	510,079	303,904
Liverpool.....	393,986	1,085,958	4,070	21,922	170,096	596,241	1,860	1,079	330,087	179,680
Manchester.....	64,244	168,681	143	686	4,419	14,819	.....	.....	29,225	17,958
Bristol.....	311,731	833,574	9,027	48,882	10,692	39,795	.....	.....	18,426	12,036
Glasgow ..	65,725	158,230	641	3,266	9,954	35,844	.....	.....	214,002	133,580



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The work of the above cargo inspectors has been carried on in a most satisfactory manner; complete reports respecting the condition in which each cargo was landed during the past year have been sent to the Chief of the Extension of Markets Division, Ottawa.

A. W. GRINDLEY.

## REPORT OF THE LIVERPOOL AND MANCHESTER CARGO INSPECTOR (MR. W. CARTER).

LIVERPOOL, March 31, 1911.

I herewith beg to submit the following report for the year 1910-11:—

The past season shows a decrease in all agricultural products arriving at this port, with the exception of Canadian bacon and frozen meats. The shipments of cheese have fallen off slightly, butter and eggs were very scarce, and apples showed the lowest arrivals for many years. Against this there was a considerable increase in the quantities of bacon and frozen meats.

## CHEESE.

The condition of cheese boxes shows no improvement on past seasons. There was again a heavy percentage of tied and broken boxes and I can only repeat the chief cause of this is the poor quality of many of the boxes used and not sufficient care taken in packing cheese in perfectly fitting boxes. Cheese have not been quite so carefully handled by the shipping companies this season owing to the fact that they have been working the Montreal service with four steamers each instead of the usual five and this has meant a great hurry and rush in unloading cargo.

There has been very little cause for complaint *re* heated cheese, but there have been some complaints about cheese being cut and pilfered, both here and in Manchester.

## BUTTER.

The few small consignments that arrived here this season were in excellent order and condition except that none of them were sacked, which is a great mistake.

## EGGS.

The three small shipments of eggs arrived in good order. Canadian eggs are very well liked here and we could do with considerably larger quantities.

## FROZEN MEATS.

There has been an increase in the arrivals of frozen meats, and while the contents have been in good order and condition, there has been a lot of trouble with the package, especially the crates. These were altogether too light and frail for the weight of meat packed in them, with the result that 30 to 40 per cent of them required cooping on landing.

## BACON.

Shipments of bacon have increased considerably and all landed here in very good order and condition.

## APPLES.

This has been one of the poorest seasons for Canadian apples for many years. Not only have shipments been very light but a lot of the fruit has been poor. This



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applies particularly to the shipments arriving during the first ten weeks of the season, for the early fruit showed small and very short of colour. There was an improvement in the quality when the winter varieties began to arrive, but even then they were not up to the usual Canadian standard. Owing to the scarcity they realized exceptionally high prices nearly all the season, but had some of the apples that arrived here late in January and early in February been shipped in time for the Christmas market they would have done better still.

An effect of the shortage of Canadian apples has been to introduce to our market large quantities of box apples from Washington, Illinois and other parts of the States. Most of these have been handsome apples exceedingly well packed and graded, and they have realized such good prices that we are almost sure to have even heavier shipments next season. In fact, these apples look like becoming serious rivals of Canadian apples, and Canadian packers must see that their fruit is thoroughly well packed and graded next season.

I am pleased to say there has been very little complaint *re* frozen apples and none against the package, nothing but good barrels having been used. There has been little or no complaint *re* branding of apples this season.

## PEACHES.

The few shipments of peaches landed here in good order, being sound and very well packed, but they showed poor keeping qualities, for many of them turned black after being landed two or three days. In my opinion some of them were too green when packed and were carried at too low a temperature. I think 38 to 40 degrees low enough for tender fruit like peaches. It must also be borne in mind that there is a very limited market here for peaches and that the supply must be carefully regulated.

## POULTRY.

The one small Christmas consignment landed here in excellent order.

## AREA IN WHICH CANADIAN PRODUCE IS DISPOSED OF.

Canadian agricultural produce arriving in Liverpool is distributed nearly all over the United Kingdom, while some goes even as far as Malta. A lot goes as far north as Aberdeen and some as far south as London; Ireland and North Wales also take a lot.

The principal markets are the great mining and manufacturing districts of Lancashire, Yorkshire and the Midlands, and the two distributing railway companies are the London and Northwestern and the Lancashire and Yorkshire. I herewith give the railway rates on provisions and fruit to a few of the main inland towns.

*London and Northwestern Railway Company.*

*From Liverpool to Manchester.*—Bacon, cheese and butter, 9s. 2d. (\$2.23) per ton; pears and apples, 7s. 11d. (\$1.92) per ton; peaches, apricots and cherries, 10s. 10d. (\$2.63) per ton; eggs, 10s. 10d. (\$2.63) per ton.

*From Liverpool to London.*—Bacon, cheese, butter, apples and pears, 25s. (\$6.07) per ton; eggs, 36s. 9d. (\$8.91) per ton; peaches, apricots and cherries, 39s. 4d. (\$9.56) per ton.

*From Liverpool to Newcastle-on-Tyne.*—Bacon and cheese, 19s. 2d. (\$4.66) per ton; butter 20s. 10d. (\$5.06) per ton; eggs, 25s. 4d. (\$6.15) per ton, apples and pears, 18s. 4d. (\$4.46) per ton; peaches, apricots and cherries, 40s. (\$9.73) per ton.

*From Liverpool to Sheffield.*—Bacon, butter and cheese, 18s. 4d. (\$4.46) per ton; eggs, 24s. 4d. (\$5.91) per ton; apples, 17s. 4d. (\$4.21) per ton; apples, 4 ton lots,



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owner's risk, 13s. 4d. (\$3.24) per ton; apples, 4 ton lots, carrier's risk, 14s. (\$3.40) per ton; cheese, 4 ton lots, 15s. 10d. (\$3.85) per ton; pears, 4 ton lots, 14s. (\$3.40) per ton; pears, 2 ton lots, 15s. 9d. (\$3.83) per ton, less than 2 tons, 17s. 4d. (\$4.21) per ton; apricots, peaches and cherries, 24s. 4d. (5.91) per ton.

*From Liverpool to Birmingham.*—Bacon, 20s. (\$4.86) per ton; butter and cheese, 20s. 10d. (\$5.06) per ton; eggs, 25s. 3d. (\$6.13) per ton; apples, 17s. 6d. (\$4.25) per ton; pears, 17s. 6d. (\$4.25) per ton; peaches, apricots and cherries, 25s. 3d. (\$6.13) per ton.

*From Liverpool to Nottingham.*—Bacon, butter and cheese, 21s. 8d. (\$5.26) per ton; eggs, 28s. (\$6.80) per ton; apples, 20s. 11d. (\$5.08) per ton; apples, 4 ton lots, not delivered, 16s. 8d. (\$4.05) per ton; pears, 4 ton lots, 16s. 8d. (\$4.05) per ton, 2 ton lots, 18s. 4d. (\$4.46) per ton; less than 2 tons 20s. 11d. (\$5.08) per ton; peaches, apricots and cherries, 28s. (\$6.80) per ton.

*From Liverpool to Leicester.*—Bacon and butter in 2 ton lots, 22s. 6d. (\$5.46) per ton, less than 2 tons, 23s. 4d. (\$5.67) per ton; cheese in 2 ton lots, 22s. 6d. (\$5.46) per ton, less than 2 tons, 23s. 4d. (\$5.67) per ton; eggs, 30s. 9d. (\$7.47) per ton; apples, 21s. 6d. (\$5.22) per ton; apples, 4 ton lots, not delivered, 18s. 4d. (\$4.46) per ton; pears, 4 ton lots, 18s. 4d. (\$4.46) per ton, less than 4 tons, 21s. 6d. (\$5.22) per ton; peaches, apricots and cherries, 30s. 9d. (\$7.47) per ton.

*Lancashire and Yorkshire Railway Company.*

*From Liverpool to Manchester and London* the rates on bacon, butter, cheese, eggs, apples, pears, peaches, apricots and cherries are exactly the same as those quoted by the London and North Western Railway Company.

*From Liverpool to Leeds.*—Bacon and cheese, in 4 ton lots, 15s. 10d. (\$3.85) per ton of 2,240 pounds, in 2 ton lots, 16s. 9d. (\$4.07) per ton; butter, 16s. 9d. (\$4.07) per ton; eggs, 20s. 5d. (\$4.96) per ton; apples and pears, 15s. (\$3.65) per ton; peaches, apricots and cherries, 20s. 5d. (\$4.96) per ton.

*From Liverpool to York.*—Bacon, cheese and butter, 20s. (\$4.86) per ton; eggs, 30s. 9d. (\$7.47) per ton; apples, 21s. (\$5.10) per ton; pears, 21s. (\$5.10) per ton; peaches, apricots and cherries, 30s. 9d. (\$7.47) per ton.

*From Liverpool to Barnsley.*—Bacon, 4 ton lots, 15s. 10d. (\$3.85) per ton, less than 4 tons, 18s. 4d. (\$4.46) per ton; cheese, 15s. 10d. (\$3.85) per ton in 4 ton lots, less than 4 tons, 19s. 3d. (\$4.68) per ton; butter, 4 ton lots, 15s. 10d. (\$3.85) per ton, less than 4 tons, 18s. 4d. (\$4.46) per ton; eggs, 22s. 9d. (\$5.52) per ton; apples and pears, 17s. 1d. (\$4.15) per ton; peaches, apricots and cherries, 22s. 9d. (\$5.52) per ton.

*From Liverpool to Burnley.*—Bacon, 14s. (\$3.40) per ton; cheese, 15s. 9d. (\$3.83) per ton; butter, 15s. 9d. (\$3.83) per ton; eggs, 18s. 4d. (\$4.46) per ton; apples and pears, 11s. 9d. (\$2.85) per ton; peaches, apricots and cherries, 18s. 4d. (\$4.46) per ton.

*From Liverpool to Halifax.*—Bacon and butter, 15s. 9d. (\$3.83) per ton; cheese 15s. 10d. (\$3.85) per ton; eggs, 19s. 3d. (\$4.68) per ton; apples and pears, 14s. 2d. (\$3.44) per ton; peaches, apricots and cherries, 19s. 3d. (\$4.68) per ton.

In addition to the railway rates there is a charge of 1s. 8d. (40 cents) per ton on provisions and 1s. 9d. (42 cents) per ton on fruit for cartage from the quay to the railway station on all goods sold ex quay.

There is a lot of both provisions and fruit that pass through this port on what are known as 'through rates,' which include all railway, steamship, cartage and other charges from any given place in Canada to any place in Great Britain.

W. CARTER.



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## REPORT OF THE CARGO INSPECTOR FOR GLASGOW (MR. JAS. A. FINDLAY).

GLASGOW, March 31, 1911.

## CHEESE.

Importations of Canadian cheese to Glasgow for the season of 1910 show a falling off of quite 35,000 boxes compared with 1909. This larger reduction was caused by a larger than normal make of Scotch cheese and a very low consumption of cheese throughout the summer and early autumn, notwithstanding the relatively low retail price of cheese compared with other foods (fresh meats, bacon and eggs maintaining high prices throughout). Another adverse influence was a strike of boilermakers in the various Clyde engineering works which threw a large body of men idle for a few months. Importers had therefore a most unsatisfactory time carrying increasing stocks from week to week, as prices paid for Canadians were too high to sell profitably here in competition with low prices ruling for Scotch cheese, and many merchants had ultimately to sell at a loss before the important rise in prices took place towards the end of the year.

The Scotch make, while a large one in quantity, was unsatisfactory in quality, being much more irregular than usual, discolouration being a pronounced feature and hardness of texture noticeable. Merchants here affirm that public taste is changing and that a cheese of softer consistency is being demanded by the consumer. The prevailing dissatisfaction with the season's make resulted in a meeting of merchants, cheesemakers and others interested in the industry, being held in Glasgow where types of desirable and undesirable cheese were on view to demonstrate to makers what was required by the trade. It is worthy of note that amongst types of cheese meeting the markets' demands, there was a sample of Canadian produce.

*Quality and condition.*—In most respects the condition on arrival was satisfactory, no heated cheese being in evidence, and only in a few cases was slight grease showing on the skins of a few parcels shipped during the summer months. Importers generally offer favourable comment on the season's arrivals as regards quality and condition, and from all accounts the shipping of green cheese this year has diminished in quantity, and it is to be hoped that the improvement shown this year may soon result in the total disappearance of this practice. On all hands Canadian cheese are commended for their uniformity as compared with Scotch manufacture, as, while choicest grades of the latter may surpass Canadians for flavour, the general make is more irregular and this year they have been more so than usual. Canadian cheeses rarely show discolouration, whatever other defects may appear, but some lots showed a tendency to be brittle and over-acid, and others to be too tight, some suspiciously so. I hear of some June and July cheeses which arrived a trifle firm and which at the moment of writing have not mellowed but are harder than ever; such a condition gives rise to grave suspicion. A complaint pointed out last year has again been observable this, viz., cheese arriving damp on the ends and the rind soft.

*The weight question.*—This is still a depressing feature of the Canadian cheese trade, in respect that the accuracy of marked weights cannot be relied on, and importers find it essential to test thoroughly the weights of each shipment for shortage, particularly during the summer months. It is a serious matter to importers who have contracted to take a factory's weekly output to find the cheese arrive showing from one-half to two and three pounds short weight per box, not to speak of odd boxes turning up five to ten pounds lighter than the marked weight, which viewed in the most favourable light can only be considered gross carelessness.

*Boxes.*—The condition of the boxes is another matter requiring attention as, with the exception of a limited number of brands, there is great room for improvement.



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This year the percentage of tied and broken boxes during the Montreal season showed an increase, while the condition of arrivals via United States ports was materially worse. The usual primary causes are still apparent, viz., irregular boxes—too long and too wide for the cheese—poor wood, boxes slimly put together at ends, and large sized cheese, weighing from 90 to 100 pounds, which are too heavy for the quality of the boxes. I generally find among parcels of this weight an unusually heavy percentage of damage, frequently 30 to 40 per cent, but this year up to and over 50 per cent has been a feature in some factories, and it is manifestly clear that stronger packages are necessary and that stricter attention should be paid to the fit of the boxes. In passing, I may say that abnormal-sized cheese of 90 pounds and upwards are universally condemned here. One correspondent, in referring to the high percentage of breakages, advocates the possibility of making the boxes out of the new three-ply wood presently coming into general use which, he understands, can be obtained at very small cost.

The branding of cheese boxes still displays carelessness; odd boxes continue to arrive lacking shipping brand, factory or weight marks; the pencilling, instead of the stencilling of weights, is still largely persisted in.

#### BUTTER.

The shipments of Canadian butter are yearly decreasing and this year only 1,250 boxes with 13 addressed packages comprised the total arrivals at Glasgow as compared with 3,469 boxes last year. The price of Canadian produce was too high for profitable importation. Of the 1,250 boxes, 585 were sacked and 671 unsacked; all shipments were carried in refrigerators, the bulk at a temperature round 20 degrees or lower; very prompt delivery was taken, 910 boxes being lifted the day of discharge, 96 the day after, 226 the second day and 18 boxes the third day.

*Condition.*—The condition on arrival was satisfactory, as likewise the quality, some parcels being very choice in body, texture and flavour; others, however, were decidedly weaker in these respects. Buyers here favour pasteurization; the best New Zealand and Australian is made from pasteurized cream and the former this season has been of outstanding quality. The boxes were carefully handled and discharged in good order.

Canada's contribution to the butter market of Glasgow is now so small and it is so long out of the market that it attracts less attention than formerly, and at the present rate of annual decrease will soon, like the egg trade, have disappeared.

#### BACONS AND MEATS.

Hog products show a welcome increase over last year's importations from Canada. This year, 3,259 boxes of bacon and 50 barrels of pork with 65 tierces of lard compound were received, as compared with 1,260 boxes and 121 barrels last year. The boxes and contents were discharged in good condition and very satisfactory prices ruled throughout the year. The trade would welcome increased shipments on this year's showing.

#### CANNED MEATS.

This trade from Canada consists of importations of jellied veal only, of which 387 cases arrived compared with 230 last year; the quality is good and gives satisfaction to purchasers.

#### FROZEN MEATS, ETC.

Fresh meat importations compare unfavourably in quantity with season 1909, there being only 10,753 boxes, 160 pieces in sacking and 68 tierces pickled beef this year as against 17,521 boxes and 100 bags last year. The fresh meats were all carried



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in refrigerators and landed in good condition generally, but some boxes in a few shipments were of poor quality and of doubtful soundness. Out of two shipments during end of May and beginning of June 31 boxes were condemned as unsound by the Food Inspector, and subsequently a shipment during August arrived showing the contents of a quantity of the boxes mouldy and of doubtful soundness but not sufficiently so to warrant the Inspector to condemn them. The system of inspection of boneless meats instituted two years ago is strictly enforced.

## CANNED APPLES.

A slight shrinkage of over 3,000 cases of canned apples show on the season's importations to date, there being 31,939 cases apples and 150 cases pears as compared with last year's total of 35,046 cases apples. The various shipments have come to hand in satisfactory shape, little damage to cases appearing, and contents evidently being free from damage or leakage of tins. The percentage of blown tins continued at about the satisfactory average of three to five per cent. The pack of the New York firm, Curtice Bros., still leads Canadians in price and popularity here, and buyers affirm that the former comprise better selected and higher quality fruit. The weight of fruit is also slightly in excess of the Canadian pack, with less liquid.

## APPLES.

The Canadian apple trade with Glasgow this season has been of an unsatisfactory nature, the importations being the smallest on record for a considerable number of years; the quality also was disappointing. At moment of writing only 81,000 barrels and 15,330 cases have arrived, as compared with last year's totals of 312,165 barrels and 31,843 boxes from Ontario and 38,604 barrels and 189 boxes from Nova Scotia. There were no direct shipments this season from Nova Scotia, though a few hundreds arrived in Glasgow via London by rail and coasting steamer. The shortage from Canada was partly met by increased arrivals from other sources but not in sufficient quantities to supply the demand, consequently prices ruled higher on the average for all varieties than during the 1909 season. The shortage mentioned resulted in larger importations of barrel stock from various districts of United States of America, Virginia, Maine and western states. The Virginia fruit was of excellent quality; Maine Baldwins very fair but western state apples poor in size and quality. Larger quantities of box fruit from California, Oregon, Washington, &c., arrived; the Oregon, Newton and Spitz have been of excellent quality and pack and received universal praise.

*Condition.*—The condition of Canadians on arrival throughout the season was generally very fair; a few parcels among the early summer fruit arrived over-ripe and towards the end a small percentage indicated frost effects. With these exceptions, arrivals were in sound order as a rule. The quality, as stated, was unsatisfactory; the high prices conduced to shipment of somewhat inferior grade and generally the pack was irregular, very few parcels of choice fruit arriving. Good winter stock was very scarce; Baldwins generally lacked colour. Spys throughout lacked colour and keeping quality, and were also scarce. The feature of the Ontario shipments was the pack of the Norfolk fruit growers, several of their shipments being of choice grade and quality. The Newcastle fruit growers also placed one or two good parcels on this market; these with a limited few smaller shippers forwarded reliable fruit.

*Boxes.*—The box apple trade in Glasgow is one of increasing dimensions, and this year's trade indicates that Glasgow offers an outlet for a large proportion of high class boxed fruit at all periods of the recognized apple season; boxes containing apples characterized by uniformity of size and colour, with skins free from blemish and clean for the variety, fairly bold in size,—but not exceedingly so nor irregular



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in shape so as to be deemed coarse—will return to shippers a much enhanced price over the barrel equivalent. The barrel, I presume, will always retain its place as the popular commercial package, but very large quantities of boxes were shipped here from United States districts this season, influenced, no doubt, by the scarcity of the Ontario and Nova Scotia barrel supplies. Buyers are becoming increasingly discriminating regarding value of appearance and if Ontario orchardists are going to capture and retain a portion of this high class box trade, decidedly more scientific care of orchards and more careful selection of fruit in packing is essential. I am satisfied that an increased quantity of boxed Ontario apples can be absorbed here, and it lies with the Ontario packers to cater for the Scotch consumer's eye as well as his palate. The popularity of the King, Spy and Baldwin on this market is admitted on all hands and, granting the excellence of flavour of these varieties, buyers are influenced by uniformity of size, evenness of colour and cleanness of skin. The most popular size of Oregon Newton Pippins here is from 96 to 112 apples per 40 pound case, the latter size preferred.

## BRITISH COLUMBIA FRUIT.

There were direct shipments of 1,653 boxes of apples this season from British Columbia. These arrived in good condition and participated in the high prices ruling. One parcel from Kelowna district, composed of Jonathan, Spitz, Newton Pippin, McIntosh Red and Grimes Golden, was of excellent quality and condition.

## PEARS.

The importations of Canadian pears to Glasgow indicate a growing demand, as 7,885 cases and half cases and 69 barrels were imported this year as compared with about 5,000 packages last year. Unless in seasons of very plentiful crops in France and southern England (whence a large proportion of the Glasgow supply comes) increased quantities of pears could be absorbed from Canada. Of the total receipts all, with the exception of 225 packages, were carried in refrigerator round 35 to 38 degrees, and all arrived in good condition, except a few barrels of Anjou which were decaying. The half case is the favourite package for all varieties except Keiffers, which may safely be packed in the 40 pound box or even in barrels. Very large quantities of Keiffers are marketed here from the United States, the bulk of which are sold to north and northeast coast of England buyers who attend the Glasgow market; and indications point to an increased demand for pears, both of Keiffer and more choice varieties, in coming seasons.

## GLASGOW A DISTRIBUTING CENTRE.

It may be of interest to learn that Glasgow is the chief distributing centre for Scotland in bacons (Canadian and United States of America), apples and pears (Canadian and U. S. A.). Canadian bacon imports with the exception of about one per cent are handled by Glasgow houses. Large quantities of U. S. A. imports on the other hand, are consigned on a through bill of lading to northeast coast of England firms, cheap rates being offered by railway companies to Newcastle and district to compete with Liverpool. Glasgow is the great distributing centre for apples (Canadian and U. S. A.); quite 95 per cent of the total imports of Canadian apples are sold in the fruit bazaar and central commercial saleroom; barely five per cent of the arrivals are consigned to Aberdeen, Dundee, Edinburgh and Newcastle (England); the U. S. A. shipments of apples are practically all consigned to Glasgow houses. During the apple season buyers attend the Glasgow sales from Aberdeen, Perth, Dundee, Edinburgh, Leith, Dumfries, Ayr and practically all minor distributing centres



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of Scotland, as well as large buyers from the north and northeast coast of England. The English firms purchase a very large portion of the total imports of apples and the major portion of Keiffer pears.

'The cheese importations to Glasgow, with the exception of between 5,000 to 10,000 boxes consigned to Dundee and Leith firms, are all handled by Glasgow firms. Aberdeen merchants imported direct from Montreal by ss. *Bellona* 985 boxes cheese. Glasgow is the distributing centre in cheese for all the west of Scotland, and Glasgow firms cater to the north and east coast also. No United States cheese were imported into Glasgow this year.

## THE PORT OF LEITH.

The port of Leith, on the east coast of Scotland, had thirteen direct shipments from Montreal, per Thomson line, arriving every three or four weeks from May to December 31, 1910. These thirteen steamers brought a total quantity of 44,028 boxes of cheese; a large quantity of this total was on behalf of one or two Glasgow firms for their east coast of Scotland trade and a small portion for Dundee and Aberdeen merchants.

## FREIGHT RATES.

The ocean freight rates from Montreal to Glasgow on cheese, butter, &c., is as follows:—Cheese, \$6.38 per ton; butter, \$11.31 per ton in refrigerator; apples, 66 cents per barrel—refrigerator 36 cents extra; pears, \$6.07 per 40 cubic feet.

In addition to the ocean rate mentioned the shipping companies quote the following tariff to points named:—

*Aberdeen* (by rail).—Apples, \$4.94 per ton; cheese, \$5.14 per ton; butter, \$5.14 per ton; bacon, \$4.40 per ton in four ton lots.

*Dundee*.—Apples, \$3.93 per ton; cheese, \$4.96 per ton; butter, \$4.96 per ton; bacon, \$3.99 per ton in four ton lots.

*Leith and Edinburgh* (by rail).—Apples, \$3.42 per ton; cheese, \$3.44 per ton; butter, \$3.44 per ton; bacon, \$3.28 per ton in four ton lots.

*Newcastle (England)*.—Apples \$4.33 per ton; cheese, \$4.36 per ton; butter, \$4.36 per ton; bacon, \$4.19 per ton in four ton lots.

These charges include transshipment expenses amounting to from 5s. to 6s., composed of harbour dues, master portorage and cartage from dock to connecting steamer or railway.

I learn that Aberdeen and Dundee merchants import the majority of their cheese on a through bill of lading from Montreal via London, and transhipped by coasting steamer to Aberdeen and Dundee; the cost by this route to Dundee is cheaper than via Glasgow, amounting to only 35s. per ton. The merchants of Dundee and Aberdeen, however, inform me that the percentage of broken boxes by London is excessively high on account of the extra handling. The through rate from Brockville to Aberdeen via London is 51s. 2d. per ton.

Following is a summary of direct imports to Glasgow, Aberdeen and Leith for the season 1910-11.

*Glasgow*.—Cheese, 78,850 boxes and 759 cases containing jars; butter, 13 addressed pkgs. and 1,250 boxes; bacon, 3,345 boxes; pork, 50 barrels; lard compound, 65 tierces; frozen meat, 10,753 boxes and 160 pieces in sacks; pickled beef, 68 tierces; canned meats, 387 cases jellied veal; canned apples, 31,939 cases; canned pears, 150 cases; canned fruit and sweet corn, 80 cases; apples, 81,433 barrels and 15,330 boxes; pears, 7,885 cases and half cases and 69 barrels; peaches, 285 cases.

*Aberdeen*.—Apples, 2,315 barrels; cheese, 985 boxes.

*Leith*.—Apples, 104 barrels; cheese, 44,028 boxes.

JAS. A. FINDLAY.



## REPORT OF THE BRISTOL CARGO INSPECTOR (CAPT. H. E. SHALLIS).

BRISTOL, March 31, 1911.

I herewith submit particulars of the work for the port of Bristol for the past year, dating from March 1, 1910, to February 28, 1911, giving comparisons with the previous year of same dates.

## CHEESE.

We have received 435,000 boxes of cheese, a slight increase of 4,000 boxes over last year, though during the Montreal season the imports showed an increase of over 16,000 boxes. Taking the year round the quality has been most satisfactory, especially the fall made cheese. The chief cause of complaint has been the difference in weight of the cheese as compared with that marked on the box, after due allowance is made for shrinkage. The condition of the boxes does not improve, especially those from Quebec province; sometimes a fairly good lot comes along, but at no time do they compare with the western boxes. With regard to heated cheese we have been very free this past season. Only part of one shipment suffered rather heavily; these were all waxed cheese and arrived here in the hot weather at the time of the dock strike, consequently were delayed in ship. There is still a quantity of boxes received with no shipping marks which often causes trouble and dispute between shipping company and merchant.

## BUTTER.

Although our imports are far ahead of the other ports still there is a falling off of over 6,000 packages, our totals amounting to 18,923 boxes and tubs. The quality has been very good. All the shipments came forward in refrigerator chambers and on being landed were loaded direct into iced vans and forwarded to destination.

## BACON.

Our imports of bacon amounted to 1,830 boxes—an increase of over 700. The boxes were good and strong and the condition of the meat on arrival excellent; the food inspectors here speak most highly of it, and merchants would welcome a bigger trade in Canadian bacon.

## EGGS.

This trade seems entirely lost, all our imports being now from Ireland and the continent.

## PEACHES AND PEARS.

During September we received a trial shipment of 101 boxes of peaches sent by the department, part being sent forward to Birmingham and Cardiff, the balance sold here; they landed in good condition but quickly ripened; however, they realized an average price of 4s. 3d. per box. As a trial shipment it was very satisfactory and from opinions expressed by some of the leading fruit merchants they hope it will lead to a big trade. A small shipment arrived later from the Biggs Fruit Company, but these were scattered over various towns. We also received 139 barrels and 600 cases pears—brands Keiffer, Beurre D'Anjou and Gloria Mundi. These were well packed and, with one or two exceptions in the boxes which showed signs of frost, they all landed in excellent condition.



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## APPLES.

The present season shows a falling off of over 2,000 barrels owing to the short crop, our arrivals being a little over 17,000 barrels, including 175 from the United States. Early shipments came along in good condition but instances occurred where the grading was somewhat imperfect. Later shipments proved not so good, the fruit having been more or less frosted, and in the interior of the barrels the fruit was of poorer quality than on the top. With the advent of the Royal Line from Halifax we have had a quantity of apples from Nova Scotia and these have turned out very satisfactory, Baldwins and Ben Davis being the chief brands. This year we have had fewer varieties than in previous years. With one or two exceptions, the total quantity imported was sent through to Cardiff, which is becoming a big distributing centre for the apple trade. The barrels from Ontario were good, sound and well made; those from Nova Scotia were rough in appearance and not so strongly made.

## SHIPPING.

In the past year we have had an increased number of sailings owing to the two steamers *Royal Edward* and *Royal George* of the Canadian Northern Steamship Company entering this service. These two ships, although not large freight carriers, have turned out their cargoes in very good condition. They each have a refrigerated space of 10,900 cubic feet and, although not fitted with any 'cooled air' system, have large fans in each of the holds. These steamers maintain a speed of 18 to 19 knots, and so are especially suitable for the carrying of perishable goods which have to be placed on the market as quickly as possible. The other two lines, viz.: Dominion and Canadian Pacific Railway, conjointly during the summer kept up a weekly service with five boats instead of six as in the previous years. All the ships were fitted with both refrigerators and cooled air chambers and their cargoes have always turned out well. On arrival the freight was carefully handled and given quick despatch to the various destinations.

## FREIGHT RATES.

The railway freight rates from the port of Bristol to the points named, on goods carried on through bills of lading inclusive of transshipment and delivery charges, are as follows:—

*To Bath.*—Bacon, hams and cheese, 8s. 5d. (\$2.04) per ton; butter, 10s. (\$2.43) per ton; eggs, 12s. 4d. (\$3) per ton; apples, 9s. 11d. (\$2.41) per ton.

*To Birmingham.*—Bacon, hams and cheese, 19s. 3d. (\$4.68) per ton; butter, 20s. 10d. (\$5.06) per ton; eggs, 26s. 4d. (\$6.40) per ton; apples in 2 ton lots, 13s. 9d. (\$3.34) per ton, less than 2 tons 16s. 11d. (\$4.11) per ton.

*To Cardiff.*—Bacon, hams, cheese, in 3 ton lots, 8s. 5d. (\$2.04) per ton, 2 ton lots, 8s. 9d. (\$2.12) per ton; butter, 3 ton lots, 10s. (\$2.43) per ton, 2 ton lots, 10s. 4d. (\$2.51) per ton; eggs, 3 ton lots, 9s. 5d. (\$2.29) per ton, 2 ton lots, 9s. 9d. (\$2.37) per ton; apples, 4 ton lots, 7s. 1d. (\$1.72) per ton, less lots 10s. 10d. (\$2.63) per ton.

*To Gloucester.*—Bacon and hams, 11s. 9d. (\$2.85) per ton; cheese, 12s. 3d. (\$2.98) per ton; butter, 13s. 4d. (\$3.24) per ton; apples, 10s. 10d. (\$2.63) per ton; eggs, 16s. 9d. (\$4.07) per ton.

*To London.*—Bacon and hams in ten ton lots, 19s. 3d. (\$4.68) per ton, 1 ton lot, 25s. 1d., (\$6.09) per ton; cheese, 10 ton lots, 19s. 3d. (\$4.68) per ton, 4 ton lots, 24s. 3d. (\$5.89) per ton, 1 ton lot, 25s. 1d. (\$6.09) per ton; butter, 10 ton lots, 20s. 10d. (\$5.06) per ton, 4 ton lots, 25s. 10d. (\$6.27) per ton, 1 ton lot, 26s. 8d. (\$6.48) per ton; eggs,



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5 ton lots, 27s. 9d. (\$5.74) per ton, less than 5 tons, 33s. 7d. (\$8.16) per ton; apples, 3 ton lots, 17s. 11d. (\$4.36) per ton, 2 ton lots, 18s. 9d. (\$4.56) per ton, 1 ton lots, 19s. 7d. (\$4.76) per ton.

*To Newport.*—Bacon, hams and cheese, 3 ton lots, 8s. 5d. (\$2.04) per ton, 2 ton lots, 8s. 9d. (\$2.12) per ton, 1 ton lots 9s. 1d. (\$2.21) per ton; butter, 3 ton lots, 10s. (\$2.43) per ton, 2 ton lots, 10s. 4d. (\$2.51) per ton, 1 ton lot, 10s. 8d. (\$2.59) per ton; eggs, 3 ton lots, 9s. 5d. (\$2.29) per ton, 2 ton lots, 9s. 9d. (\$2.37) per ton, 1 ton lot, 10s. 1d. (\$2.45) per ton; apples, 4 ton lots, 6s. 7d. (\$1.60) per ton, 2 ton lots, 7s. 1d. (\$1.72) per ton.

*To Northampton.*—Bacon, hams and cheese, 28s. (\$6.80) per ton; butter, 29s. 7d. (\$7.19) per ton; eggs, 38s. 7d. (\$9.36) per ton; apples, 26s. 7d. (\$6.46) per ton.

*To Oxford.*—Bacon, hams and cheese, 21s. (\$5.10) per ton; butter, 22s. 7d. (\$5.48) per ton; eggs, 28s. (\$6.80) per ton; apples, 19s. 7d. (\$4.76) per ton.

*To Southampton.*—Bacon, hams and cheese, 4 ton lots, 13s. 5d. (\$3.26) per ton, 2 ton lots, 14s. 3d. (\$3.46) per ton, 1 ton lot 15s. 1d. (\$3.67) per ton; butter, 4 ton lots, 15s. (\$3.65) per ton, 2 ton lots, 15s. 10d. (\$3.85) per ton, 1 ton lot, 16s. 8d. (\$4.05) per ton; eggs, 26s. 11d. (\$6.54) per ton; apples, 4 ton lots, 14s. 7d. (\$3.54) per ton.

*To Swansea.*—Bacon, hams and cheese, 11s. 9d. (\$2.85) per ton; butter, 13s. 4d. (\$3.24) per ton; eggs, 22s. (\$5.34) per ton; apples, 12s. 7d. (\$3.06) per ton.

## ACKNOWLEDGMENTS.

As in previous years I am constantly in touch with the dock steamship officials and find that at all times they are ready to render any service in the interest of the Canadian trade, and I am much indebted to them for the same.

H. E. SHALLIS.

## REPORT OF THE LONDON CARGO INSPECTOR (MR. THOS. E. DAVIS).

LONDON, March 31, 1911.

## GENERAL.

Throughout the past season I have been in personal attendance at time of arrival of each steamer entering this port from the Dominion of Canada and have kept a close watch upon the out-turn of cargoes from the steamers of the Thomson, Canadian Pacific Railway, Allan, Furness and Furness-Leyland lines. I have also followed up the delivery of the goods to the various markets or warehouses, and after final disposal of each cargo I have made out a report applying to each separate vessel.

## CHEESE, BUTTER, BACON AND EGGS.

Cheese from Montreal has been landed this season in good condition and has given general satisfaction. At the same time attention must again be drawn to the breakage of boxes, the cases being ill fitted to the size and shape of the cheese. It is a very difficult matter to replace these boxes in London, and a considerable loss arises on the sale of the cheese. Surely it is possible for the men at the factories to exercise a little more forethought in such matters, bearing in mind the number of handlings and transhipments the cheese has to undergo.

*Bacon.*—Shipments have turned out in satisfactory order and condition.

*Butter.*—There has been a distinct falling off in the quantities sent forward.

*Eggs.*—Not a single package has arrived this season.



SESSIONAL PAPER No. 15a

## APPLES.

The Ontarian crop shipped to London has been lighter than usual and the fruit has in some quarters been spoken of as lacking in quality. If, however, the price realized is any criterion of the quality, it is hardly possible to credit these reports, it being evident that if there was anything wrong with the fruit the retailers would never have paid such high figures as we have witnessed this season. Appearance is almost everything in the higher grades of Ontario fruit and it is evident that the quality must have been pretty well up to the standard when such a price as 25s. per barrel has been recorded. In passing, I think it only right to express the view that some of the growers would be better advised in placing their consignments only in the hands of salesmen of good standing and established repute. There is a tendency amongst some of the growers to be led away by specious advertisements put forward by parties who have little experience in the trade and are only concerned to get hold of the fruit with the sole object of making as much as possible for themselves and with little or no regard to the sender's interests.

Nova Scotian apples have also realized high prices throughout the season, and, whilst to a large extent this is doubtless due to the fact that the crop has been light and the demand keen, it must also be said that the condition and quality have in the main been well up to standard. This brings me to the subject of my last year's report, and the current rumours that next season will in all likelihood produce a very large crop of fruit in Nova Scotia, and possibly in other quarters also. If this is realized, growers cannot expect a return on their outlay which can compare with the season just closing.

Whenever there is a bumper crop, it would be most advisable that steps should be taken to develop fresh markets at outlying ports and towns conveniently accessible from London. This would be far better than leaving such work to the London salesmen, which simply means that a number of London local charges are incurred on the fruit quite unnecessarily and the extra handling to and from market is also detrimental. I am emphasizing this point once again as it is a matter which should be of great interest to the growers, and it is no use being wise after the event. The system can be worked by means of through bills of lading.

## PORT AUTHORITY RATES.

Since my last report the various London dock companies have been consolidated under one control, entitled the Port of London Authority, established by Act of Parliament. This authority acting on a provisional order, has published a list of port rates of goods, a selection of which you will find attached hereto.

## ACKNOWLEDGMENTS.

For the courtesy and assistance with which I have always been favoured, I have once again to record my sincere acknowledgment to Dominion officials, shipping companies, merchants and brokers, to all of whom I am indebted in many ways.

THOMAS E. DAVIS.



## BUTTER TRANSPORTATION

The special iced car service for the transportation of butter to Montreal, which is arranged for by this department, was in operation as usual from May 16 to October 15. As customary this Division had three travelling inspectors and three at the Montreal terminals testing the temperatures of butter and supervising the service generally.

Reports received from our inspectors in the early part of the season stated that a considerable number of soiled and dirty packages were being loaded into the iced cars at country shipping points, due to the fact that the butter was either hauled to the station in dirty wagons or that no precaution was taken to protect the packages from rain and mud during the trip. As it is important that the package containing such a delicate article of food as butter should present a clean and inviting appearance, butter-makers should take pains to see that the packages in every shipment are loaded into the cars in a clean condition. During the haul from the creamery to the station the packages should rest on clean straw and should be protected by a cover that will keep out rain and mud. The use of a sack for each package is a great advantage. These can be returned to the shipper and used several times. It is hardly fair to insist on the railway companies providing clean refrigerator cars for the butter traffic if the packages are delivered to them in a soiled and dirty state.

In May and the early part of June the weather was very cool and this fact apparently caused butter makers to neglect their cold storage rooms, as our inspectors' reports showed that butter had been loaded as warm as 64 degrees. There is no reason why creamery butter should test higher than 45 degrees when loaded into cars provided the creamery cold storage is properly looked after and the butter is not unduly exposed at the railway station.

The total number of cars with butter inspected at Montreal during the season was 967, as follows:—

At G. T. R. terminals—471 cars.

At C. P. R. terminals—399 cars.

At C. N. Q. R. terminals—97 cars.

These carried a total of 273,034 packages of butter weighing over eighteen million pounds. The average temperature of the butter when unloaded from the cars at Montreal was about 53 degrees, while the average quantity of ice in the bunkers per car was approximately 1,200 pounds.

## TEMPERATURES OF QUEBEC BUTTER, 1905-10.

The following statement shows the average temperature of creamery butter at shipping points in the province of Quebec for the six year period from 1905 to 1910, inclusive:—



SESSIONAL PAPER No. 15a

TABLE No. 1.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910. (Inspector, J. N. Lemieux).

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910	1909	1908	1907	1906	1905
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Ant. Gennis	St. Raymond.	39.2					
J. A. McCallum	Danville	41.0	40.2	44.9	53.8	40.1	44.2
C. E. Lamarche & Cie.	St. Esprit	42.2	41.0	57.4			
George Bennett (Hazel Bank)	New Glasgow	42.5	46.2	44.5	47.5		
" " (Elm Bank)	"	43.0	52.0	47.0	48.3		
" " (Oak Bank)	"	43.5		51.7	48.5		
Pierre Proulx	St. Agathe de Lotbiniere	44.1	42.1	43.1	42.8		
I. Dion	La Chapelle	44.3	52.4	46.3	52.5		
Eugene Roy	St. Clement	44.7	46.4	50.9	50.3		
E. Dumas	St. Epiphane	44.7	45.7	45.4	47.7	55.3	
Louis Levesque	Cacouna	45.0	48.5	48.2			
Pierre Goulet	St. Isidore	45.4					
A. Breton	St. Epiphane	45.6	46.8	47.3	52.0	52.0	
Forget & Parthenais	St. Anne des Plaines	46.0	44.4	47.0	50.0	49.0	
Leon Theriault	Isle Verte	46.1	46.3	46.7	43.4	42.2	
Joseph Helie	St. Wenceslas	46.5	45.0	53.5	45.5		
Eug. Godbout	St. Eloi	46.7	49.6	51.6	50.0		
Charles Harvey	Amqui	46.8	50.5		50.0		
W. St. Georges	St. Jean de Matha	47.0	49.8				
W. Gareau	St. Jerome	47.3	53.3	46.9	50.5	50.0	
Cyris Godbout (C. G.)	St. Eloi	47.5	52.7	53.1			
Geo. Bennett (Green Bank)	New Glasgow	47.5	57.0	60.0	57.0		
F. X. Senay	Brodeur	47.6	50.4	53.2	50.0	52.0	
F. E. Moore	St. Bernard	47.6					
E. Mercier	St. Charles Bellechasse	47.7	47.6	50.8	55.0		
J. A. Bourbonnais	Pont Chateau	48.0	51.8				
Desire Milot	Yamachiche	48.3		63.5			
J. L. Côté	St. Guillaume	48.4	41.0				50.3
Philibert Gauthier	St. Lac de Matane	48.4	51.1	49.0	44.0		
C. Guitard	St. Joseph du Lac	48.5		47.4	58.0	54.6	
J. A. Saindon	St. Arsene	48.5	50.7	47.5	52.0	50.3	
W. Girard	Acton Vale	48.5	52.4	57.0	59.0		
E. R. Pepin	St. Basile de Portneuf	49.6	49.2	51.5	54.4	55.8	56.0
J. Edgar Larose	St. Lin (Laurentides)	49.0	49.0		51.3		
Forget & Parthenais (F. P. 2)	St. Anne des Plaines	49.0	46.8			45.0	
O. Robérge	St. Norbert	49.0	54.2			61.3	
Damien Comtois	Cap St. Gabriel	49.0	51.5	43.7	52.5		
Bourassa & Frere	Yamachiche	49.0	60.5	68.5			
Aug. Pelletier	St. Roch des Aulnaies	49.0	54.8	58.5	60.0		
Louis Roy	St. Jacques Nord	49.0	49.0	55.0			
M. McDuff	Upton	49.0	54.4	57.6	54.0		
Cassen Bros	Kingsey	49.1	46.3	52.5	43.6	44.1	
J. H. Vadnais	L'Ange Gardien	49.3	53.7	57.7	50.0	48.2	50.1
F. Ravenelle	L'Ange Gardien	49.3	49.8	55.7	56.0	52.8	53.4
L. P. Marchand	St. Anne de la Perade	49.3	47.9	53.3			
A. Champagne	St. Emelie de L'Energie	49.5	54.0				
O. Beaudry	St. Emelie de L'Energie	49.5	49.8				
W. Rioux	Cedar Hall	49.6	52.1				
A. A. Nicolle (N)	St. Simon (Rimouski)	49.6	48.1	50.6	48.8		
Rev. M. Noel	St. Cyprien	49.6	54.3	53.6	59.0		
Fred Thibault	L'Islet Station	49.7	53.0	54.5	54.0		
Wm. Parent	St. Guillaume	49.8	44.5				
A. Chagnon	St. Dominique	50.0	58.5	63.0			
C. A. Laurier	Lachenaie	50.0	50.0	54.5			
Nap. Paquin	St. Jerome	50.0					
J. Blanchet	St. Anne La Pocatiere	50.0	56.6	59.5			
L. A. Boucher	L'Islet	50.0	51.1	51.0	54.5		
Cyris Godbout (H. B. R.)	St. Eloi	50.0	50.1	51.0	47.3		
Jos. Binet	Warwick	50.2					
J. Chamberland	Sandy Bay	50.4	52.8	51.5	51.0		
A. S. Deslaudes	St. Valerien	50.5	57.0	54.6	57.0		
J. B. Theriault	St. Modeste	50.6	53.1	52.2	50.3	54.6	
P. Plante	St. Joseph de Lepage	50.7	52.0	55.6		53.6	



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TABLE No. 1.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910. (Inspector, J. N. Lemieux)—  
*Continued.*

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910.	1909.	1908.	1907.	1906.	1905.
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Cyris Godbout (B) .....	St. Eloi.....	50.8	49.5	46.1	51.8	.....	.....
Eug. Casavant.....	Upton.....	51.0	.....	.....	.....	.....	.....
Arthur Drouin.....	Ste. Sophie de Lacorne.....	51.0	52.7	59.0	51.8	.....	.....
J. A. Moreau.....	.....	51.0	.....	.....	.....	.....	.....
Ls. Archambault.....	Grondines.....	51.1	58.1	54.5	57.6	55.5	.....
J. A. Ratté.....	St. Paul de Montmagny ..	51.3	55.1	57.4	57.0	.....	.....
Maurice Beaulieu.....	St. Philemon.....	51.4	.....	.....	.....	.....	.....
E. Brosseau (E. B.).....	St. Sauveur des Monts.....	51.5	62.7	59.3	63.5	.....	.....
C. Laviolette.....	Cadot.....	51.5	61.0	57.2	.....	.....	.....
A. Blouin.....	St. Liguori.....	51.5	.....	56.0	.....	.....	.....
A. Lapointe .....	" .....	51.5	62.6	55.0	.....	.....	.....
Jos. Lemonde.....	St. Liboire.....	51.5	56.5	59.1	53.8	.....	.....
N. Morin.....	Ste. Helene de Kamouraska	51.5	57.0	.....	58.0	.....	.....
Jos. Houle .....	St. Jean de Matha.....	51.5	50.5	.....	.....	.....	.....
L. L. Gale.....	St. Cyr.....	51.5	40.7	54.8	.....	.....	.....
L. Tourigny.....	Plessisville.....	51.6	.....	.....	.....	.....	.....
H. Guilbault.....	Vauchuse.....	51.6	51.6	.....	.....	54.3	.....
C. E. Duguette.....	St. Hyacinthe .....	51.6	54.5	58.5	.....	.....	63.0
A. W. St. Cyr.....	Ste. Anne de la Perade.....	51.7	52.3	60.6	.....	.....	.....
H. H. Wilson.....	St. Sylvestre Ouest.....	51.7	48.4	47.2	49.0	.....	.....
Exilius Desroches..	Ste. Béatrice.....	51.8	48.0	.....	.....	.....	.....
E. Brosseau (E. B. 4.).....	St. Sauveur des Monts .....	52.0	67.0	63.3	66.3	.....	.....
" (E. B. 5.).....	" .....	52.0	69.0	64.3	66.0	.....	.....
H. Leroux.....	Ruisseau St. Georges.....	52.0	52.1	52.6	51.0	.....	.....
Syndicat St. Philomene.....	Fortierville.....	52.0	.....	51.8	.....	.....	.....
J. W. Stuart.....	Lacolle.....	52.0	.....	.....	.....	.....	.....
P. Kerouack.....	St. Eugène de L'Islet.....	52.2	54.3	59.0	58.5	.....	.....
Louis Tanguay.....	St. Hénédine.....	52.3	.....	.....	.....	.....	.....
J. B. Anctil.....	Matane.....	52.3	51.2	48.0	50.0	.....	.....
A. Alarie.....	St. Jérôme.....	52.3	55.2	51.0	53.8	67.6	.....
B. Bernier.....	St. Michel de Bellechasse ..	52.4	56.2	.....	.....	.....	.....
A. Dandonneau.....	St. Damien de Brandon.....	52.4	47.4	45.4	48.0	.....	.....
Syndicat St. Isidore.....	Coulombe.....	52.4	.....	.....	.....	.....	.....
Ringuette et Frère.....	St. Nazaire d'Acton.....	52.5	56.4	60.8	47.0	.....	.....
U. Malo .....	St. Paul de Joliette.....	52.5	57.0	55.3	59.0	.....	.....
J. H. Paquette.....	St. Théodore d'Acton.....	52.5	54.2	58.4	57.0	.....	.....
J. Durand.....	Upton.....	52.5	51.0	53.5	54.5	.....	.....
O. Chagnon.....	St. Valerien.....	52.5	57.8	58.8	.....	.....	.....
Syndicat St. Paschal.....	St. Paschal.....	52.5	50.1	49.0	51.0	.....	.....
Frs. Roy.....	Notre Dame du Mt. Carmel	52.5	50.8	45.1	56.0	.....	.....
Naz. Demers .....	St. Giles.....	52.5	51.2	53.8	55.6	.....	.....
Jos. B. Grenier.....	Ste. Rosalie.....	52.5	47.8	48.4	49.5	.....	.....
John Belanger.....	Green River.....	52.6	55.0	.....	.....	.....	.....
Jos. Gaudet.....	Ste. Marie Salomee.....	52.8	50.2	57.0	53.0	.....	.....
Achille Carrier.....	Buckland.....	52.8	52.7	62.0	58.0	.....	.....
Norbert Rocheleau.....	St. Gabriel de Brandon.....	52.8	54.5	.....	.....	.....	.....
Leon Boucher.....	St. Valere de Bulstrode.....	52.9	.....	.....	.....	.....	.....
Syndicat Ste. Sophie.....	Ste. Sophie de Levrard.....	53.0	.....	.....	.....	.....	.....
V. Houle.....	Ste. Helène de Bagot.....	53.0	57.2	60.8	51.2	.....	.....
J. Lachapelle.....	St. Jacques L'Achigan.....	53.0	55.1	.....	53.5	.....	.....
C. Forget.....	St. Liguori.....	53.0	62.0	58.0	.....	.....	.....
J. Blanchet.....	Ste. Anne de la Pocatière..	53.0	56.6	59.5	.....	.....	.....
H. Provencher.....	Standfold .....	53.0	.....	.....	.....	.....	.....
Wm. Houle .....	St. Claude.....	53.0	56.5	56.6	.....	.....	.....
Alp. Mercier.....	St. Patrice.....	53.1	52.2	49.2	49.8	.....	.....
C. Eug. Michaud.....	Isle Verte.....	53.1	.....	.....	.....	.....	.....
Lucien Robert.....	Yamachiche .....	53.2	63.0	.....	.....	.....	.....
Dr. Dubé .....	St. Sylvestre Est.....	53.3	52.1	54.0	56.5	.....	.....
Narcisse Gadoury.....	St. Jean de Matha .....	53.4	52.2	.....	.....	.....	.....
Lucien Bélanger.....	St. Damien de Buckland ..	53.3	54.4	55.1	59.0	.....	.....
A. Pagé.....	St. Scholastique.....	53.3	.....	.....	.....	.....	.....
D. Kerouack.....	St. Narcisse.....	53.4	51.4	53.3	51.5	.....	.....



## SESSIONAL PAPER No. 15a

TABLE No. 1.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910. (Inspector, J. N. Lemieux)—*Continued.*

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910.	1909.	1908.	1907.	1906.	1905.
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Ed. Jean.....	St. Fabien.....	53.4	56.3	53.6	53.3		
Ed. Belanger.....	Cap St. Ignace.....	53.5	55.3	58.7	58.0		
Geo. Beausoleil.....	St. Alexis (Montcalm).....	53.5	62.7	58.2	55.3		
F. Goyette.....	St. Valerien.....	53.5					
Horace Brunelle.....	Upton.....	53.5	52.8	56.7	56.4		
Sam. Pellerin.....	St. Paul de Joliette.....	53.5	52.5	54.3	55.0		
G. Michon.....	St. Pie.....	53.6	47.5	50.5		44.2	55.6
A. Lafond.....	St. Didace.....	53.6	53.5	59.5			
T. St. Georges.....	St. Ambroise de Kildare.....	53.6	53.1	54.2	51.0	53.6	
Emile Pellerin.....	St. Martin.....	53.6					
D. Guilbault.....	St. Gabriel de Brandon.....	53.8	52.0	45.3	54.3		
C. Dion.....	Stanford.....	54.0					
A. Langevin.....	Jogues.....	54.0	48.5	59.0			
Despres & Dandelin.....	St. Pie.....	54.0	45.5	48.0		50.3	56.1
Jos. Desroches.....	St. Beatrice.....	54.0	51.0		53.0		
Louis Bernier.....	St. Evariste.....	54.0	55.3	64.0	50.6		
Jos. Beaulieu.....	St. Flavie.....	54.0	50.0		52.5	48.6	
Cyrille Hebert.....	St. Paul Isle aux Noix.....	54.0					
A. Paquette.....	St. Magloire (Bellechasse).....	54.1					
Sam Pellerin.....	St. Paul de Joliette.....	54.2					
P. Dionne.....	St. Philippe de Neri.....	54.2	56.3	59.7	58.0		
A. Fortin.....	St. Cyrille de L'Islet.....	54.2	51.6		52.3		
John April.....	Chemin Taché.....	54.2	54.3	55.1	52.3		
A. Belzil.....	St. Mathieu.....	54.2	52.9	53.3	54.0		
A. A. Nicole (2).....	St. Simon de Rimouski.....	54.2	52.2	48.2	46.6		
Phil Roussel.....	Isle Verte.....	54.3	53.5	55.6	50.3		
Roch Gamache.....	Ste. Julienne.....	54.5					
Madame Trottier.....	St. Sophie de Levrard.....	54.5					
D. Pelletier.....	Acton Vale.....	54.5	49.5	51.2	54.0		
Aug. Robitaille.....	St. Jean de Matha.....	54.5	54.6				
Ovide Wattier.....	St. Clet.....	54.6					
E. Menard.....	Acton Vale.....	54.7	57.0	57.5	56.4		
Louis Verro.....	Buckland.....	54.7					
Joseph Anctil.....	Riv. Blanche.....	54.8					
H. A. McNeil & frere.....	Napierville.....	55.0		53.0			
Elphege Call.....	Chatillon.....	55.0					
Octave Roy.....	St. Ephrem de Tring.....	55.0					
Jos. Lamarche.....	L'Epiphanie.....	55.0	63.0				
D. Tetreault.....	Upton.....	55.0	56.2	58.2	52.5		
J. Fleury.....	St. Leon.....	55.0	47.8	42.2	57.8	60.6	57.0
Ludger Pellerin.....	Stanford.....	55.0	57.0	58.3			
J. A. Menard.....	Acton Vale.....	55.0					
E. Grenon.....	St. Barnabe (St. Hyacinthe).....	55.2	49.1	52.9	50.8	45.6	51.7
Ed. Frechette.....	St. Felix de Valois.....	55.3	56.8				
A. Richer.....	Emileville.....	55.3	57.4	62.0	53.5		
O. Hardy.....	St. Sylvere.....	55.5					
Bigras & Leger.....	St. Scholastique.....	55.5					
D. McCarthy.....	Ulverton.....	55.5	54.5	61.0	53.0		
Jos. Guertin.....	St. Liboire.....	55.5	57.2	59.4	65.0		
Cleophas Marceau.....	St. Vallier.....	55.5	55.0	60.0	55.5		
F. Prevost.....	Acton Vale.....	55.6	51.8	59.3	56.9		
Alp. Gazaille.....	St. Dominique de Bagot.....	55.6	57.7	60.0		53.2	
G. Roy.....	Montmagny.....	55.7	54.6	53.7	53.0		
E. Marchand.....	St. Joseph de Nicolet.....	55.8	51.5	57.5	53.0		
A. Lapalme (Hillcrest).....	St. Hugues.....	55.8	54.5	56.0	52.0	55.0	
Geo. Doucet.....	St. Leonard (Nicolet).....	56.0					
O. W. Seguin.....	St. Polycarpe Jct.....	56.0	55.3				
Pierre Dion.....	St. Liboire.....	56.0	53.2	57.2			
Tessier & Neven.....	St. Ambroise de Kildare.....	56.0					
A. Grenier.....	Joliette.....	56.0	54.0	47.0			
J. A. Masse.....	St. Agathe de Lotbiniere.....	56.0	50.0	58.3	50.3		
J. Aug. Roy.....	St. Jean de Matha.....	56.0	52.8			54.0	



2 GEORGE V., A. 1912

TABLE No. 1.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910. (Inspector, J. N. Lemieux)—*Continued.*

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910.	1909.	1908.	1907.	1906.	1905.
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
E. H. Dumas	Notre Dame du Lac	56.1	56.2				
Geo. Vermette	St. Agapit	56.2	46.9	51.6	53.6		
Louis Letourneau	Stanford	56.2					
Ludger Rioux	Trois Pistoles	56.2	54.4	52.1	50.7		
Geo. Bergeron	Chacoura	56.3					
Nap. Dufresne	St. Helene de Bagot	56.3	55.0	60.5			
J. P. Charpentier	L'Avenir	56.3					
A. Brasseur	St. Christine	56.4	57.1				
Montreal Dairy Co.	Montreal	56.4	51.6				
Emile Leclerc	St. Guillaume	56.5					
Felix Ron leau	St. Emelie de L'Energie	56.5	51.0				
Frs. Robitaille	St. Damien de Brandon	56.5	51.0	55.8	54.8		
Thomas Lacerte	St. Severe	56.5	62.2	63.6	61.5		
A. Chagnon	St. Dominique	56.5					
Philippe Heon	St. Louis de Blandford	56.5					
Henri Malehiot	St. Gertrude	56.5	59.5	61.0	50.0		
J. A. Heroux	St. Perpetue	56.5					
L. P. Paradis	St. Raphael	56.6	55.4	58.6	55.8		
Wilfrid Ferron	St. Leon	56.6	55.6	54.6	52.7		
Jos. Charette	St. Zenon	56.6	50.7				
A. Robillard	St. Jean de Matha	56.7	52.8				
G. Tremblay	Laurence	56.7					
Arthur Toutant	St. Gregoire de Nicolet	56.8					
W. Deshaies	St. Sylvere	57.0					
Chas. E. Gelinas	St. Sylvere	57.0					
Az. Deslauriers fils	St. Dominique de Bagot	57.0	57.2	59.8			
H. Leconate	St. Théodore d Acton	57.0	53.8	59.6	54.3		
Eug. Gourgue	St. Paul de Buton	57.0	55.5				
Camille Joly	St. Emelie de L'Energie	57.0	56.5				
H. Letourneau	Shipping Station Labelle	57.0	57.0				
Alfred Dion	Wotton	57.0					
H. Provost	L'Epiphanie	57.1	53.6	60.0	55.0		
S. Deslauriers	Danby	57.2					
Camille Bernier	Cap St. Ignace	57.2	51.9	58.0			
Fortin & Blanchet	Napierville	57.3		60.0			
O. Archambault	St. Paul L'Ermite	57.3	55.5				
App. Drouin	St. Elzear	57.3					
Honore Charland	St. Simon de Bagot	57.4	58.0	58.8	52.7	53.7	
Canadian Farm Produce	Montreal	57.5					
Alphide Laplante	St. Perpetue	57.5					
Pacifique Houle	St. Germain de Grantham	57.5	57.5	60.4	49.0		
App. Roberge	St. Samuel	57.5					
Alb. Roy	St. Ephrem de Tring	57.5	56.0	55.7	56.3		
A. Allard	L'Assomption	57.5					
W. Landreville	St. Jean de Matha	57.5	55.2				
G. E. Dussault	St. Marguerite (Dorchester)	57.5					
Exilius Lanthier	St. Augustin (2 Mountains)	57.6	62.0	55.2	54.2	56.4	
Ed. D. Desrosiers	St. Felix de Valois	57.6					
D. Lariviere	St. Marie de Blandford	57.6	57.5	57.5			
Albert Houle	St. Simon de Bagot	57.6	57.0	61.2	50.0	55.0	
Jos. Rocheleau	St. Didace	57.8	52.7	56.1	61.5		
A. Tremblay	St. Aubert	57.8	52.7	57.7			
I. Jodoin	St. Theodore d'Acton	57.8	56.7	53.2	51.5		
Elzear Beaudoin	Kingsey Falls	58.0					
J. D. Blanchet	St. Roch des Aulnaies	58.0	55.3	58.9	56.0		
Raoul Trottier	St. Casimir	58.0					
Hubert Jean	St. Evariste	58.0					
Achille Fournier	Gentilly	58.0					
Albert Desrosiers	St. Beatrice	58.0	52.5	58.0			
M. Boucher	St. Melanie	58.1	53.3	52.5	56.5	60.0	
T. Lizotte	St. Louise	58.2	56.1	58.5			
Theriault & Frere	St. Alphonse Rodriguez	58.2	53.5	55.0	55.0		



## SESSIONAL PAPER No. 15a

TABLE No. 1.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910. (Inspector, J. N. Lemieux)—*Continued.*

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910.	1909.	1908.	1907.	1906.	1905.
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
A. Gamache.....	St. Jean Port Joli.....	58.3					
W. Vezina.....	Cap Sante.....	58.3	57.6	66.2	59.3		
Albert Lapointe.....	St. Paul d'Industrie.....	58.4	59.1	55.0	52.0		
J. Dumas.....	St. Jean de Dieu.....	58.5	56.2	54.3	54.0		
Aug. Boucher.....	St. Cleophas de Brandon.....	58.5	52.7				
Adelard Bernard.....	St. Ephrem de Tring.....	58.5	55.3	56.7	54.8		
Jos. St. Pierre.....	St. Rosalie.....	58.6	56.0	59.0	52.0		
Theberge & Letestu.....	St. Pie.....	58.6					
J. P. Cyr.....	Lambton.....	58.6					
Chs. E. Gravel.....	L'Assomption.....	58.6	55.0	61.3	58.2		
R. Maillet.....	St. Honore.....	59.0					
Ribeau & Ratté.....	St. Antoine de Tilly.....	59.0					
J. A. Allaire.....	St. Roch L'Acligan.....	59.0	59.6	62.8	56.0		
L. Parent.....	L'Assomption.....	59.0					
B. Bergeron.....	La Minerve.....	59.0					
D. Lorrain (St. J.)..	St. Janvier.....	59.0	56.5	61.5	58.0		
O. Ratelle.....	Lavaltrie Station.....	59.2					
J. E. Tondreau.....	Montmagny.....	59.2	57.6				
A. Dupont.....	St. Christine.....	59.2					
Achille Fournier.....	Gentilly.....	59.3					
V. Gerry.....	Milton.....	59.3	51.0	62.0			
Pierre Rancourt.....	St. Ephrem de Tring.....	59.5					
P. H. Gareau.....	St. Polycarpe.....	59.5	58.2				
Jos. Perron.....	St. Casimir.....	59.5					
Doucet & Clement.....	L'Epiphanie.....	59.5	59.0	61.5	54.0		
Max Ginser.....	Joliette.....	59.5					
A. Gaudreau.....	L'Islet.....	59.5	54.7	61.2	55.5		
A. Lacomte.....	St. Pierre Riv. du Sud.....	59.5	56.3				
Jos. C. Rioux.....	Mont Joli.....	59.5	49.2	53.8	53.8		
Pierre Langlois.....	St. Angèle de Merizzi.....	59.5	52.6		57.0	53.3	
J. P. Rocheleau.....	Pauline.....	59.6	55.0				
E. Casavant.....	Papineau.....	59.6	56.5	60.0			
Eustache Ménard.....	L'Anse à Gilles.....	59.7	55.1	62.5	60.0		
J. E. Dion.....	St. Sébastien (Beauce).....	59.7					
O. Gendron.....	Yamachiche.....	59.8	60.4	64.2	65.2		
A. Robidoux.....	Annonciation.....	60.0					
Ludger Lacasse.....	Ste. Lucie.....	60.0	55.0	57.2			
J. W. Kimpton.....	Shawbridge.....	60.0	61.5	59.5	59.3	63.0	
A. Plante.....	St. Félix de Valois.....	60.0					
Naz. Héroux.....	St. Barnabé (St. Maurice).....	60.0	59.6	59.3			
Ls. Lebeau.....	St. Paul l'Ermite.....	60.0	66.0	59.0			
P. Houle.....	St. Apollinaire.....	60.0					
F. Demers.....	St. Honoré.....	60.0					
Noël Massé.....	St. Ephrem de Tring.....	60.0	54.6	56.9	54.8		
Gédéon Roy.....	St. Ephrem de Tring.....	60.0	53.0	57.3	49.1		
Jos. Tremblay.....	Petite Matane.....	60.0	63.6				
A. Desmarais.....	St. Félix de Valois.....	60.2	56.0				
E. Aubin.....	St. Apollinaire.....	60.3					
H. Lapalme.....	Abbotsford.....	60.3	61.2	63.7	52.0	51.4	62.0
A. Lapalme.....	St. Hugues.....	60.4	54.7	48.0	50.0		
H. Lacasse.....	St. Lucie.....	60.4	58.5	59.3	64.3		
J. A. Hamel.....	Ste. Emilie de Lotbinière.....	60.4					
J. G. Héroux.....	Terrebonne.....	60.5	56.7		59.5		
A. Olivier.....	St. Norbert.....	60.5	54.7	56.0	54.5		
Fulbert Garneau.....	St. Martin.....	60.5					
P. Noël.....	St. Apollinaire.....	60.5					
Cyris Godbout.....	St. Eloi (St. Rose du Degelé).....	60.6					
Cléophas Vadnais.....	St. Marcel.....	60.6	55.0	59.0			
Amédée Touchette.....	Milton.....	60.6					
Archer Roy.....	St. Elizabeth.....	60.7	61.3	58.3	54.4		
L. E. Côté.....	Montmagny.....	60.7	58.2	59.5	61.0		



TABLE No. 1.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910. (Inspector, J. N. Lemieux)—*Continued.*

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910.	1909.	1908.	1907.	1906.	1905.
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Jos. Tremblay.....	St. Félicité.....	60.8	56.4	55.8	55.5		
A. Bourgoin.....	Mascouche.....	61.0					
Boisvert & Gauthier.....	Terrebonne.....	61.0					
Arthur Bazinet.....	St. Emilie de L'Energie.....	61.0	56.8				
D. Lorrain.....	St. Janvier.....	61.0					
Hector Blanchard.....	St. Hyacinthe.....	61.0	57.0		61.0		
A. Deragon.....	St. Valérien.....	61.0	51.0	58.0		53.8	
Zenon Binet.....	St. Augustin.....	61.2					
J. A. Héroux.....	St. Elie de Caxton.....	61.3					
Paul Robidoux.....	St. Marcel.....	61.3	53.5				
O. Malenfant.....	St. Rose du Degelé.....	61.5	61.0				
Azare Brien.....	Pont Mousseau.....	61.5	59.2				
A. Casavant.....	St. Dominique.....	61.5					
Joseph Roy.....	St. Vallier.....	61.6	59.7	60.0			
Boisvert & Bussière.....	Caxton.....	61.8	61.0	63.0	59.5		
W. A. Oswald.....	Petit Brûlé.....	61.8					
D. T. Brunet.....	St. Eustache.....	61.8					
J. Dessert.....	Petite Rivière.....	62.0	58.0	58.5			
Sinaï Simard.....	St. Donat.....	62.0					
A. Lessard.....	St. Adèle.....	62.0					
Jos. Shaw.....	St. Jérôme.....	62.0					
Jos. Dufresne.....	St. Gabriel de Brandon.....	62.0	52.0				
Irénée Thibault.....	St. Pamphile.....	62.0					
Z. A. Leblanc.....	South Durham.....	62.0					
T. Messier.....	St. Hélène de Bagot.....	62.0	58.5	63.3	47.0		
J. G. Hamelin.....	St. Polycarpe Junction.....	62.0	63.5				
Aurèle Leclerc.....	St. Eugène de Grantham.....	62.0	56.3	59.5	53.3		
N. Tétreault.....	St. Hugues.....	62.2	54.5	59.0	50.5	53.6	
Gélinas & Boucher.....	St. Barnabé (St. Maurice).....	62.2	59.3	61.6			
Jos. Bolduc.....	Morin.....	62.3	54.7	56.6			
J. Bernier.....	St. Jean Port Joli West.....	62.3					
Omer Vallières.....	Potvin.....	62.3					
W. Talbot.....	St. George (Beauce).....	62.3					
P. Lehuis.....	Grande Frenière.....	62.5	63.6	61.0			
Geo. Barabé.....	Gentilly.....	62.5					
Henri Bergeron.....	St. Charles de Mandeville.....	62.5	52.0		52.0		
L. Lecompte.....	St. François (Montmagny).....	62.5	56.1	57.2	61.0		
J. E. Grenier.....	Hunterstown.....	62.5	61.4	62.6			
R. Chagnon.....	St. Germain de Grantham.....	62.5	45.4	59.0	49.0		
Geo. Lacasse.....	St. Honore.....	62.5	50.6	51.3	52.0		
J. B. Lalonde.....	St. Monique (2 Mountains).....	62.6					
J. Adelaar Bourbonnais.....	St. Polycarpe.....	62.8	56.0				
Jos. Lucas.....	St. Gabriel (Rimouski).....	63.0					
J. St. Martin.....	St. Louis de Bonsecours.....	63.0					
Phileas Allard.....	St. Alexis des Monts.....	63.0	60.2	60.0	51.5	66.3	
Achille Fournier.....	Gentilly.....	63.0					
Prudent Dumas.....	St. François (Montmagny).....	63.3	56.0				
C. Proulx.....	L'Avenir.....	63.5					
S. Latulippe.....	St. Vallier.....	63.5					
Z. Gauthier.....	Mascouche.....	63.5	63.0	57.0	57.0		
H. Bergeron.....	St. Paulin.....	63.7	58.6	56.0	51.5	66.3	
Wilbrod Lamy.....	St. Leon.....	63.7	59.6	53.0			
Michel Bourassa.....	St. Barnabé (St. Maurice).....	64.0					
Ludger Caron.....	Jersey Mills (Beauce).....	64.0					
Cleophas Bolduc.....	St. Georges.....	64.0					
F. Cinq-Mars.....	St. Pierre les Becquets.....	64.0	61.3				
J. T. Girard.....	St. Angele de Monnoir.....	64.3					
L. Menard.....	St. Lazare Station.....	64.4	56.0				
J. A. Duguette.....	St. Brigitte des Saults.....	64.5					
A. Morissette.....	St. Sophie de Levrard.....	64.5					
M. Brosseau.....	Piedmont.....	64.5	63.5	62.0			
J. B. St. Pierre.....	St. Hippolyte de Kilkenny.....	64.5	53.2	62.7	68.0		





FIG. 1.—Part of a 400 acre Orchard in British Columbia.



FIG. 2.—A British Columbia Home.









FIG. 1.—A Niagara Cherry Orchard.

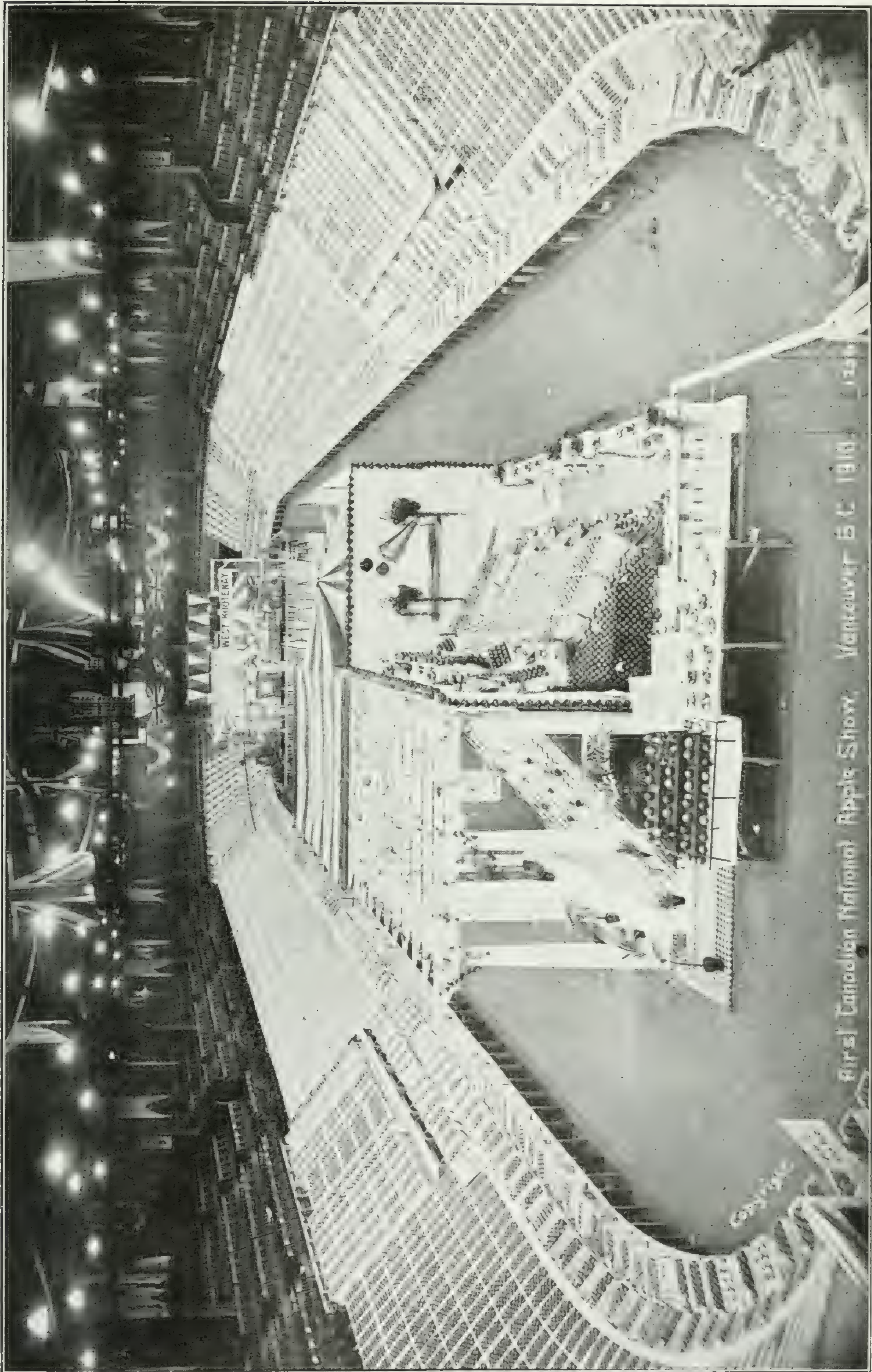


FIG. 2.—A Fine Clover Crop near Burlington, Ont.









Main Building, Canadian National Apple Show, Vancouver, 1910.







SESSIONAL PAPER No. 15a

TABLE No. 1.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910. (Inspector, J. N. Lemieux)—  
*Continued.*

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910.	1909.	1908.	1907.	1906.	1905.
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
La Cie de Laiterie .....	St. Pierre Riv. du Sud .....	64.5	55.5	59.5	.....	.....	.....
Louis Roy .....	Berthier en bas .....	64.5	.....	.....	.....	.....	.....
Alp. Drouin .....	La Baie .....	63.0	.....	.....	.....	.....	.....
Felix Bruneau .....	St. Melanie .....	65.0	56.0	.....	.....	.....	.....
Hyacinthe Cyr .....	Two Mountains .....	65.0	.....	.....	.....	.....	.....
P. Mailloux .....	Rougemont .....	65.0	60.5	63.0	50.0	51.6	53.6
Severin Boulerice .....	St. Edouard Napierville .....	65.0	.....	.....	.....	.....	.....
J. B. Coutu .....	St. Gabriel de Brandon .....	66.0	54.3	57.8	55.3	58.6	.....
J. A. Desrosiers .....	St. Felix de Valois .....	66.0	58.5	.....	.....	.....	.....
Ernest Desfosses .....	St. Paulin .....	67.5	.....	.....	.....	.....	.....
Roch Bradley .....	St. Lazaire Village .....	67.5	59.5	.....	.....	.....	.....
E. Thinelle .....	St. Calixte .....	67.5	61.5	62.0	58.0	.....	.....



2 GEORGE V., A. 1912

TABLE No. 2.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Quebec for Six Years, 1905 to 1910 (Inspector, F. A. Knowlton).

Name of Proprietor or Manager.	Post Office Address.	YEARS.					
		1910.	1909.	1908.	1907.	1906.	1905.
		Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
J. McKay (H.B.R. 8).....	North Hatley.....	43.0	48.8	52.8	46.3	43.7	48.4
J. Labelle.....	Vale Perkins.....	45.0	45.2	45.5	47.9	51.2	52.5
W. W. Reed.....	North Hatley.....	45.3	49.0	.....	41.9	43.2	47.5
A. L. Bouchard.....	Eastman.....	45.3	44.0	44.0	50.0	44.1	51.1
L. Ledouceur.....	St. Edwidge de Clifton.....	45.5	46.0	51.8	39.5	.....	.....
L. Fleurie.....	Lawrenceville.....	46.0	.....	.....	.....	.....	.....
A. Sharkey.....	Cherry River.....	46.2	47.0	51.1	48.5	48.5	.....
John McCrum.....	Iron Hill.....	46.5	47.9	49.2	45.5	43.9	43.3
Juaire & Dussault.....	Knowlton.....	46.8	48.1	48.5	46.2	49.8	47.1
Guy Griggs.....	Mansonville.....	47.1	45.0	46.5	48.5	51.2	52.7
Reverend A. Tremblay.....	St. Herménégilde.....	47.1	49.0	53.1	41.5	45.3	47.4
Bureau & Gilbert.....	Compton.....	47.2	45.0	57.4	49.6	.....	.....
H. R. Standish.....	Magog.....	47.4	46.9	47.3	45.5	48.0	47.3
A. A. Hodge.....	Sawyerville.....	48.0	45.0	43.3	43.0	47.3	52.2
Raboin & Raboin.....	Compton.....	48.6	56.2	53.6	49.8	42.6	43.3
W. K. Baldwin.....	Baldwin's Mills.....	48.6	52.5	54.0	43.6	.....	.....
Morrison & Bowen.....	East Hatley.....	48.6	54.0	52.0	50.5	50.0	52.1
H. Archambault (Rapid River).....	Farnham.....	49.0	.....	.....	.....	.....	.....
H. Purdy.....	Melboro.....	49.2	51.0	47.5	48.8	48.5	.....
J. L'Heureux.....	Katevale.....	49.3	49.0	54.2	50.5	51.8	56.3
A. Gerin.....	Coaticook.....	49.5	46.6	49.4	48.1	48.8	50.2
A. E. Fish.....	Ayers Cliff.....	49.5	50.2	.....	49.4	48.0	51.0
J. M. Darby.....	Ormstown.....	49.7	46.0	.....	.....	.....	.....
H. B. R.....	.....	49.7	.....	.....	.....	.....	.....
G. A. Robb.....	Warden.....	49.9	50.5	48.6	50.0	51.5	51.7
B. Converse.....	Barnston Corner.....	50.0	51.4	50.9	48.2	49.5	53.6
M. Riders.....	Fitch Bay.....	50.0	48.5	48.8	46.7	51.5	49.0
J. McKay (M.M.).....	North Hatley.....	50.0	.....	.....	.....	.....	.....
H. Archambault (Lily 1).....	Farnham.....	50.6	.....	.....	.....	.....	.....
G. C. Russell.....	North Stanbridge.....	50.6	.....	.....	.....	.....	.....
(Elm Bank).....	.....	50.6	.....	.....	.....	.....	.....
J. J. Vanasse.....	West Wickham.....	51.1	47.0	53.1	56.8	52.9	.....
F. Patenaude.....	St. Brigide.....	51.4	.....	.....	.....	.....	.....
E. McGowan (E. 49).....	St. Martine.....	52.5	.....	.....	.....	.....	.....
C. Desmoyers.....	Angeline.....	52.5	.....	.....	.....	.....	.....
A. L. Dupuis.....	Coaticook.....	52.6	46.6	55.0	36.6	.....	.....
E. McGowan (E. 44).....	St. Martine.....	53.0	.....	.....	.....	.....	.....
Dale 30.....	.....	53.0	.....	.....	.....	.....	.....
A. Janelle.....	West Wickham.....	53.6	.....	.....	.....	.....	.....
W. Lacasse.....	St. Etienne de Bolton.....	53.9	52.9	52.3	52.0	.....	.....
John Rooney.....	Stoke Centre.....	54.0	.....	.....	.....	.....	.....
W. Tannerhill.....	Ormstown.....	54.0	.....	.....	.....	.....	.....
H. Winter (Aberdeen 3).....	Ormstown.....	54.0	.....	.....	.....	.....	.....
Joseph Bisette.....	Versailles.....	54.0	.....	.....	.....	.....	.....
J. Leclair.....	Foster.....	54.0	.....	.....	.....	.....	.....
J. A. Vinet.....	Holton.....	54.5	50.0	55.5	53.5	48.3	49.4
W. S. Purdy.....	South Stukeley.....	55.5	47.5	56.4	.....	54.3	.....
A. Delage.....	Farnham.....	56.0	.....	.....	.....	.....	.....
M. Boyer.....	South Roxton.....	56.0	.....	.....	.....	.....	.....
Fridette & Painchaud.....	Sherrington.....	56.5	62.0	57.4	52.3	52.6	55.0
J. A. Lapierre (25).....	Bromptonville.....	56.6	47.5	42.0	.....	.....	52.1
S. Raboin.....	St. Edwidge de Clifton.....	56.8	65.5	51.8	51.4	.....	.....
W. H. Bullock.....	South Roxton.....	56.8	.....	.....	.....	.....	.....
J. Normandin.....	South Roxton.....	57.3	.....	.....	.....	.....	.....
H. Winter (Aberdeen 1).....	Ormstown.....	57.4	52.0	.....	.....	.....	.....
R. A. Delorme.....	South Roxton.....	57.6	.....	.....	.....	.....	.....
Joseph Alix.....	St. Brigide.....	58.0	.....	.....	.....	.....	.....
Stewart & Fournier (1).....	Hemmingford.....	58.0	49.0	60.0	45.3	50.8	56.6
Stewart & Fournier (2).....	Hemmingford.....	58.0	.....	.....	.....	.....	.....
(Rose 33).....	.....	58.0	.....	.....	.....	.....	.....
E. Paradis.....	St. Francois Xavier de Brompton.....	58.6	.....	.....	.....	.....	.....
J. St. Pierre.....	Roxton Pond.....	58.7	.....	.....	.....	.....	.....
J. A. Lapierre (5).....	Bromptonville.....	59.0	.....	.....	.....	.....	.....
J. A. Laperle.....	Granby.....	61.0	.....	.....	.....	.....	.....
Leopold Gevry.....	East Milton.....	65.0	.....	.....	.....	.....	.....



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TABLE NO. 3.—Average Temperatures of Creamery Butter at Shipping Points in the Province of Ontario, season 1910. (Inspector, H. G. Shufelt.)

Proprietor or Manager.	Post Office Address.	Shipping Station.	Railway.	No. of Packages Tested.	Average Temperature.
					Deg.
A. G. Calder. ....	Seaforth.....	Seaforth.....	G. T. R.	7	43·0
H. E. Wilson .....	Strathroy.....	Strathroy .....	" " "	4	45·0
Wilmot Creamery Co.....	Baden.....	Baden.....	" " "	5	45·8
W. Waddell.....	Kerwood.....	Kerwood.....	" " "	12	46·3
Saugeen Valley Creamery Co ..	Neustadt,....	Neustadt.....	" " "	14	46·6
Forest Creamery Co.....	Forest.....	Forest.....	" " "	7	46·7
Climax Creamery Co.....	Tiverton.....	Kincardine.....	" " "	8	49·5
C. E. Lister.....	Chatham.....	Chatham.....	C. P. R.	13	49·7
W. H. Harris.....	Brussels.....	Brussels.....	G. T. R.	6	49·8
Chas. McDonald.....	N. Bothwell.....	N. Bothwell ....	C. P. R.	5	50·4
Lambton Creamery Co.....	Petrolia .....	Petrolia.....	G. T. R.	12	52·0
Underwood Creamery Co.....	Port Elgin .....	Port Elgin... ..	" " "	6	52·0
M. McCall.....	Ayr.....	Ayr.....	C. P. R.	4	52·2
T. A. Stevens.....	Wheatley.....	Wheatley .....	P. M. R.	6	52·3
John Ireland.....	Ridgewood.....	Ridgewood.....	" " "	7	52·5
W. H. Brubacker.....	Dresden.....	Dresden.....	" " "	5	54·0
W. Parker.....	Merlin.....	Merlin.....	" " "	7	54·0
R. E. Frazer.....	Dutton.....	Dutton.....	" " "	5	54·2
Lang & Cunningham.....	Harrow.....	Harrow.....	" " "	7	54·7
J. H. Scott .....	Exeter.....	Exeter.....	G. T. R.	7	57·1
Winthrop Creamery Co.....	Ingersoll.....	Seaforth.....	" " "	7	59·1
Thomas Willis.....	Centralia .....	Centralia.....	" " "	7	59·2
W. G. Medd.....	Winchelsea.....	Exeter.....	" " "	18	59·8
R. A. Thomas.....	Beeton.....	Beeton.....	" " "	6	60·5
W. J. Hopkins.....	Komoka.....	Komoka.....	" " "	8	61·3
L. O. Jackson.....	Mitchell.....	Mitchell .....	" " "	5	67·2
Wm. Clairidge.....	Glen Huron .....	Glen Huron .....	" " "	7	70·2

In 1909 the lowest average temperature was 47·8 degrees and the highest 62·3 degrees, in 1908 the extremes were 47·5 and 73·3 degrees and in 1907, 41·3 and 61·3 degrees.

Each week throughout the season a letter was sent to all shippers whose butter tested higher than 50 degrees at the shipping point, and in January a circular was sent to all the names in tables 1 and 2 giving them the average temperature of their butter for the past six years, instructing them how to disinfect their cold storage rooms and urging them to store a quantity of ice sufficient for their needs.



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TABLE No. 4.—Temperatures of Ontario and Quebec Butter at Shipping Points and at Montreal, Season 1910.

	Number of Cars with Marked Packages.	No. of Packages tested at shipping points and at Montreal.	Average Temper- ature at Shipping Points.	Average Temper- ature at Montreal.	Increase in Temper- ature.	Reduction in Temper- ature.
			Deg.	Deg.	Deg.	Deg.
Ontario via C. P. R. ....	2	18	60.3	56.4	.....	3.9
" " G. T. R. ....	9	65	61.1	52.7	.....	8.4
" " P. M. R. ....	3	25	64.8	55.1	.....	9.7
Quebec (north of St. Lawrence) via C. P. R. ....	9	199	56.3	55.6	.....	0.7
Quebec (south of St. Lawrence) via C. P. R. ....	27	231	50.3	50.2	.....	0.1
Quebec via G. T. R. ....	15	193	52.1	53.5	1.4	.....
" " I. C. R. ....	9	168	55.1	54.9	.....	0.2
" " C. V. R. ....	3	33	51.2	53.1	1.9	.....
" " C. N. Q. R. ....	6	67	54.3	56.2	1.9	.....
" " Q. C. R. ....	2	43	56.5	56.1	.....	0.4
" " Q. M. & S. R. ....	4	45	59.7	57.4	.....	2.3
Totals .....	89	1,087	.....	.....	.....	.....
General average .....			54.5	53.8	.....	0.7
Season 1908, general average .....			54.9	54.4	.....	0.5
" 1907 " " .....			51.3	50.5	.....	0.8
" 1906 " " .....			52.6	53.2	0.6	.....
" 1905 " " .....			54.4	54.5	0.1	.....

In concluding this report I take pleasure in testifying to the cordial relations existing between the inspectors of this Division and the shipping companies. In the first few years of cargo inspection work we were fortunate in enlisting the sympathy and co-operation of the principal officials of the steamship companies and we have continued to hold their good will notwithstanding the fact that we are obliged sometimes to bring them to book for sins of commission or omission on the part of their employees. It is equally gratifying to point out that, in connection with the arrangement between this department and the railway companies for the running of special iced cars for butter, cheese and fruit, we find the responsible officials anxious to provide the best possible service and willing to carry out any suggestions we may make in the interests of the shippers.

Respectfully submitted,

W. W. MOORE,  
Chief, Markets Division.



PART III.—FRUIT.







### PART III—FRUIT.

#### FROM THE CHIEF OF THE FRUIT DIVISION TO THE DAIRY AND COLD STORAGE COMMISSIONER.

SIR,—I beg leave to present my report for the year ending March, 1911.

The work of the Fruit Division has been conducted this year under conditions very similar to previous years, the main portion of the work being connected with the enforcement of the Inspection and Sales Act and the publishing of the Fruit Crop Report. When not actively employed in inspection work, the inspectors were engaged in assisting at fruit meetings and judging at fruit exhibitions.

#### THE STAFF.

There have been some changes in the Fruit Division staff. Mr. M. R. Baker, who for nearly four years has been my assistant, resigned in the month of August. Mr. J. H. McLeod, by arrangement with the Department of Customs, has been appointed fruit inspector to look after the importations at Prince Rupert, B.C.

The staff at present consists of 12 permanent inspectors and 15 temporary inspectors distributed as follows:—

Mr. G. H. Vroom, a permanent inspector in Nova Scotia, has general oversight of the work in the maritime provinces. A permanent inspector is located in Prince Edward Island; four temporary inspectors in Nova Scotia and one in New Brunswick are employed during the fruit season. A temporary inspector is located at the city of Quebec and works from Montreal eastward through the province. Two permanent inspectors are placed at Montreal; these are assisted during the busy season by two temporary inspectors. Two permanent and four temporary inspectors are located in the apple sections of Ontario and remain there during the fruit season.

A temporary inspector is placed at Port Arthur. There is a quantity of fruit coming in at Port Arthur and Fort William, and Sault Ste. Marie is also a distributing point for a large quantity of Canadian fruit.

At the close of navigation at Montreal, the inspectors there are transferred to the storehouses in Ontario, which are located chiefly along the north shore of Lake Ontario.

The inspection work in Manitoba is done by a permanent inspector located at Winnipeg with an assistant during the shipping season; a permanent inspector is located at Calgary, and temporary inspectors are engaged for the work in Regina and Lethbridge.

The work in British Columbia is carried on by a permanent inspector at New Westminster, Grand Forks, Nelson and Prince Rupert. The inspectors at Grand Forks, Nelson and Prince Rupert are particularly concerned with the examination of fruit imported from the United States.

#### NATURE OF THE WORK.

There is a common misapprehension that the Dominion Fruit Inspectors attempt to examine all, or a large part of the apples, offered for sale. It is therefore necessary to continually inform the public that no attempt at anything of the sort is made. The Inspection and Sales Act places the onus of grading and marking the fruit upon



the owner at the time of packing; and the work of the fruit inspectors is to detect as many violations of the Act as possible. They are not at the disposal of packers for the purpose of giving advice upon matters of grading or packing, but confine themselves to examining the work after it is done, the supposition being that any man who attempts to pack apples is competent to do it. British Columbia and Ontario and, to a lesser extent, the maritime provinces, have instituted excellent means of instruction in the art of grading and packing fruit, and in consequence there has been a marked improvement in this respect in Canadian fruit.

#### IMPORTED FRUIT.

Special attention was directed this year to imported fruit. The imports of apples as reported by the Customs Department for 1910-11 were 135,091 barrels, valued at \$430,505, as against 59,071 barrels valued at \$261,792 for 1909-10. The number of packages inspected in 1909-10 was 2,570 and in 1910-11, 3,412. The quality of the fruit, speaking generally, was good, the percentage of higher grades being much larger than in the domestic fruits as was naturally to be expected.

Little or no complaint has been made by the merchants as to the quality of this fruit, and our inspectors report the grading and packing, in the main, quite satisfactory. The only difficulty is that of securing conformity to the Inspection and Sale Act with reference to marking. It has been insisted that the person who imports the fruit marks it according to the requirements of Section 320 of the Act.

Owing to the rapid growth of the northwest, many dealers new to the business have been opening salesrooms. These dealers require very close attention to secure conformity of the law. The inspectors report that the merchants have almost, without exception, accepted the situation and are marking the imported goods as required. From the nature of the case, it is occasionally very difficult to conform to the law, and most of the violations discovered are the result of accident, or of instructions that have been imperfectly understood by subordinates. The conditions under which the fruits are now imported leave little cause for complaint so far as they affect the Inspection and Sale Act.

#### INSPECTION STATISTICS.

The following table gives comparative statements of the number of lots inspected, number of packages in lots inspected, and the number of packages inspected for the seasons 1908-9, 1909-10 and 1910-11:—



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Variety.	No. of Lots Inspected.	No. of pkgs. in Lots Inspected.	No. of pkgs. Inspected.
1908-09.			
Apples ..... Brls.	5,940	682,657	42,223
" ..... Boxes.	248	100,792	2,701
Pears ..... "	88	54,150	7,924
Peaches ..... "	91	140,976	16,005
Plums ..... Baskets.	54	16,505	1,474
Tomatoes ..... "	53	11,381	779
Small fruits ..... Quarts.	863	1,184,651	154,874
1909-10.			
Apples ..... Brls.	7,736	859,572	63,232
" ..... Boxes.	902	157,939	7,363
Pears.. ..... "	248	41,459	2,738
Peaches ..... "	410	60,248	3,817
Plums ..... Baskets.	264	62,883	4,257
Tomatoes..... "	149	50,043	3,241
Apricots..... Boxes.	11	12,495	481
Small fruits ..... Quarts.	2,491	2,310,264	240,751
1910-11.			
Apples ..... Brls.	4,527	360,768	26,890
" ..... Boxes	1,347	234,182	9,829
" ..... Baskets.	171	17,551	10,393
Pears..... Boxes.	371	40,681	2,750
Peaches ..... "	11	2,269	36
" ..... Baskets.	383	70,564	5,932
Tomatoes..... "	56	6,570	601
Plums ..... "	189	50,575	5,144
Small fruits ..... Quarts.	1,502	568,510	155,048

CONVICTIONS.

The convictions under the Inspection and Sale Act were fewer in number in 1910-11 than in 1909-10. There were several reasons for this. The quality of the fruit for the season 1910 was much better than for 1909, and the bulk of the fruit was grown in sections of the country that have learned to respect the Inspection and Sale Act. The very vigorous enforcement of the Act by means of prosecutions in 1909, no doubt acted as a deterrent, and, also, a larger proportion of the fruit was packed by the co-operative associations and, as has been the case always, their work is seldom wrong. And, lastly, the recent amendment to the Inspection and Sale Act making the fine for a third offence from \$50 to \$200, has made it extremely unprofitable for certain disreputable dealers. These formerly practically defied the law by paying the nominal fine which did not cut seriously into their profits.

It might be pointed out here that violations of the Inspection and Sale Act are confined very largely to apple buyers. Comparatively few growers, packing their own fruit, have been convicted under the Act.

The following persons were convicted under the Inspection and Sale Act during the season 1910-11:—

Ontario:	
J. H. Bellamy..	Colborne.
W. J. Bragg..	Bowmanville.
J. A. & E. Brown..	Port Hope.
M. Burtis..	Hatchley.
J. W. Clement..	Brantford (3 convictions).
B. H. Coyle..	Colborne (2 convictions).
John Coyle..	" (4 " ).
A. E. Donaghy..	" (4 " ).







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In addition to meetings conducted almost exclusively by the inspectors, members of the staff attended and assisted at Short Courses in Fruit Growing at the Agricultural Colleges at Guelph and Truro. The Division was represented, also, at the annual meetings of the Fruit Growers' Associations of the various provinces, at the Winter Fair at Amherst, N.S., and at the National Apple Show in Vancouver, B.C. The inspectors assisted, also, in judging fruit at nine exhibitions.

## MEETINGS IN LAKE HURON DISTRICT.

A special series of meetings was organized in the apple district bordering on Lake Huron, including the following places:—

Lucan,	Dungannon,
Exeter,	Lucknow,
Zurich,	Brussels,
Brucefield,	Wroxeter,
Holmesville,	Walkerton,
Blyth,	Port Elgin,
Auburn.	

These places were chosen from the fact that orcharding succeeds well at all these points, the main criticism being that at the present time the orchards are very much neglected. This is through no fault of the climate or soil, but is the result of a variety of other causes, social and economic, that might easily be remedied.

It is interesting to note that as far as the climate and soil are concerned, orcharding can be recommended most confidently in this district. All these places are in the direct ameliorating influences of Lake Huron, and the height above the level of the sea runs from 673 feet at Port Elgin to 1,125 at Brussels.

It is interesting to note, also, that as you go further east from Lake Huron beyond the 35 mile limit in distance and higher than 1,100 feet, many of the good winter varieties cease to be altogether hardy. Although Lake Huron district is comparatively new, yet it has been settled long enough to have worked out certain problems by a natural process of elimination. The hardness of varieties of apples is one of these problems. If a line be drawn through the places bordering on Lake Huron having an elevation of about 1,100 feet and not being at a greater distance than 25 miles from the lake, it will be found that all the common winter varieties grow to perfection. There may be an occasional case of winter killing through some extraordinary condition, but in the main not only are the trees hardy but the fruit ripens thoroughly, so late, however, that when it is harvested it goes practically into natural cold storage and escapes, after it is packed, the deteriorating influence of warm weather such as is sometimes experienced in Southern Ontario and the United States bordering on Lake Erie and Lake Ontario.

The soil and the climate, too, lend themselves most admirably to orcharding. The whole district is covered with glacial deposits. This for the most part consisting of a friable clay filled with fine gravel with boulders more or less numerous and of varying size. The outstanding features are an abundance of all the elements of plant food and a mechanical condition peculiarly adapted to the growing of trees. The surface is beautifully diversified by slight elevations giving perfect surface drainage but not interfering in any way with cultivation. It is safe to say that nowhere in the world could there be more advantageous natural conditions for the growing of winter apples.

It was an easy task, therefore, to point out that mixed farming, which is so successful a feature of this district, need not be abandoned. Orchardng on a fairly large scale might be added to render farming operations much more profitable than at present. Indeed, this could be demonstrated from local observation. Scattered



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over this district are many very successful farmers following stock raising or dairying. But even the most valuable farms devoted to stock raising and dairying would not command more than \$50 or \$60 per acre for the land without the building improvements. On the other hand, there have been a few cases of late where farms have been sold, the orchards being the chief attraction. In these cases the orchard land had a value of from \$200 to \$400. The cost of putting the orchard on the land was probably not more than \$50 per acre, so that the advance in price could not be attributed wholly to the capital invested. As a matter of fact, the difference between \$50 or \$60 and \$200 or \$400 per acre is the rough estimate of the difference between the revenue derived from the two industries. But the average farmer places no such value upon his orchard because he does not derive the revenue that might be derived from a well cared for orchard. It became necessary, therefore, to account for this discrepancy between the admirable conditions for apple growing and the exceedingly poor quality and the comparatively small quantity of apples that were produced. The explanation was to be found largely in the methods of selling the apples. Few of the orchards were large, and therefore, after the local market—an exceedingly limited one—was supplied, it was not expedient for these small orchardists to reach the long distance market individually. Under the circumstances they sold to apple operators who made a business of collecting small lots from each orchard and shipping to the Northwest or to the Old Country. The evils of this method of collecting the fruit have been so often exposed that it will suffice here to say that each of the evils was intensified in the case of this district from the fact that the orchards were not only small but contained a large number of varieties, many of them being early fruit. Under these circumstances it was almost impossible for an apple operator to give a fair value for the fruit and have a margin for himself. Proper facilities could not be established for handling the fruit. Consequently, large quantities, in the aggregate, of Duchess, Alexanders, Colverts and Janettings were unsaleable and were sacrificed for stock feed for want of proper methods of handling. And even the winter fruit commanded a low price, from the fact that there was only a small quantity in each particular orchard. It was not remarkable, therefore, that the farmers became discouraged and neglected their orchards. This neglect, of course, resulted in a poor quality with reference to blemishes. Scab and Codling Moth are everywhere present and probably not more than 25 per cent in any year and a much smaller percentage in most years would grade as No. 1.

I dwelt much, therefore, in speaking at these meetings, upon the renovation of old orchards, the establishment of co-operative associations among the small growers for the purpose of aggregating their different varieties, and upon the establishment of storage facilities and evaporators in connection with the co-operative associations to utilize profitably what was formerly regarded as orchard waste. I was fortunate in being able to point to the orchard and equipment of Mr. D. Johnson, of Forest, located in the southern part of this district. In this orchard, of forty or more acres, every element of the discouraging features characterizing orcharding of this district is successfully combated. His large orchard gave him a sufficient quantity of the different varieties to command the attention of buyers; but in order to improve conditions, even in his case, he associated with himself a large number of his neighbours to form a co-operative association that has worked most successfully many years. On Mr. Johnson's farm are to be found splendid facilities, made possible by the large quantity of fruit he is growing. He has found it profitable to erect and run an evaporator capable of handling per day 500 bushels of apples below the shipping grade. I pointed out the possibility of forming co-operative associations at almost every one of the places where meetings were held and showed the benefits that would be derived from pruning, spraying and cultivating these old orchards and extending them by new plantings.

Speaking generally, the meetings were well attended and, judging from the



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correspondence which has resulted since, I feel confident that the meetings did a great deal of good.

## AMERICAN POMOLOGICAL SOCIETY.

I attended the 32nd bi-annual session of the American Pomological Society, held February 6th to the 10th, 1911, at Tampa, Florida, U.S.A. This society is international in its work and counts among its members the foremost pomologists of the continent. It reports all the important advances in horticultural science; and its decisions on nomenclature are accepted for North America. Its descriptions of varieties and estimate of their value, have been the largest factor in unifying horticultural practice on this continent; and its meetings afford a place for the discussion of moot subjects and for publishing in proper form new phases of horticultural science and practice. Its reports are the best condensation of progress in fruit growing on the continent.

The programme of this meeting was up to the high standard of former years. The cultivation of citrus fruit was given a prominent place. Perhaps the chief feature of the meeting might be said to be the discussion of the proper methods of orchard heating with a view of preventing frost injuries. This subject, though not of as great importance to the orchards of eastern Canada as to the orchards of the Pacific coast and some of the western and southern states, should still receive serious consideration. Many Canadian orchardists have been subject to severe loss even as recently as this year, owing to frost at the blossoming period, and a few years ago grape growers passed through a series of seasons when the practice of orchard heating would have saved them thousands of dollars. If a similar condition should arise, as is not unlikely, the information which will become common property through the report of this meeting, will prove exceedingly valuable to our orchardists and grape growers.

The question of a uniform package for the United States was touched upon, but no great advance was made, beyond confirming the conviction that uniformity throughout the continent would be extremely desirable.

## INSPECTION IN NOVA SCOTIA.

In Nova Scotia in former years, two inspectors worked on the docks at Halifax during the shipping season, and two visited the stores and packing houses in the Annapolis Valley along the D. A. R. from Windsor to Digby. For the season just closed a change was made whereby the inspectors were concentrated at Halifax. The point of export gave an opportunity of selecting more particularly the brands that needed attention; and on the whole the plan has worked most satisfactorily.

Owing to the short time at the disposal of the inspectors for examining fruit on the docks, helpers have been engaged to open and close the barrels, thus enabling the inspectors to make many more inspections than would be the case if they were obliged to do the whole of the cooper work.

## BROWN TAIL MOTH IN NOVA SCOTIA.

Mr. G. H. Vroom, senior inspector in the maritime provinces, employed a large part of his spare time during the winter and spring months, in assisting the entomological division of the experimental farms in the attempt to eradicate the Brown Tail Moth in Nova Scotia. From his intimate knowledge of the country and his wide acquaintance with the people of the district infected, Mr. Vroom has been able to do most efficient work which has been recognized officially by those who have the work in charge.



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## THE GRADING AND MARKETING OF FRUIT AT MONTREAL.

The season of 1910-11 will not be considered a good one by the fruit merchants generally. They found the trade somewhat unsatisfactory, first, because the quantity of fruit was small, and second, because, owing to the scarcity of apples, a large quantity of the lower grades of fruit was shipped. The merchants therefore report that the season has been characterized by a shortage of fruit, with a large proportion of the fruit of poor quality. They are correct in stating that there was a shortage of good fruit, but taking everything into consideration, the quality, perhaps, was much better than usual, but the high prices were an incentive to ship a class of fruit that ordinarily would not bring remunerative prices in any market.

A feature, however, that escaped the notice of many of the merchants was that the grading and marking was never better than this year, notwithstanding the temptation to mark a lower grade of fruit higher than it deserved on account of the scarcity of the higher grades. In no year in the history of the fruit industry was the proportion of properly graded fruit so large as in the season of 1910-11.

In order to show more conclusively how closely the majority of shippers conform to the law in their export packages, I have made an analysis of the work of one of our most careful inspectors at Montreal for September, October and November last. During these months this inspector examined 261 lots of fruit, the work of 89 packers. He inspected an average of something over 6 packages in each lot or a total of 1,785 packages; of these there were 100 packages violating the Inspection and Sale Act, the work of five packers. Each of these cases was carefully investigated and it was found that only two of them were serious enough to merit prosecution, and these two convictions were secured. It will thus be seen that, even a most critical examination could find fault with only 5 per cent of the fruit. If, however, we make allowance for the fact that three of the violations were comparatively trivial and would have escaped notice in a commercial examination, it leaves a very small quantity of the fruit that was not packed and marked according to the law. Nevertheless, this same inspector complains, in his annual report, that the quantity of the low grade fruit being exported, was very large. A careful distinction has to be made, therefore, between the criticisms of the quality of the fruit, over which the Inspection and Sale Act has no control, and criticisms as to conformity to the established grade and the marking required, the only points with which the Inspection and Sale Act deals.

It should be noted further, that in making inspections at the docks, there is usually much more fruit in sight than the inspectors can examine and, therefore, they are obliged to make a selection. In making a selection, they of course choose those brands most likely to be wrong. It is safe to say, therefore, that not more than 2 per cent of the fruit which passed through the Port of Montreal last year violated the Inspection and Sale Act with reference to grading and marking.

## PROHIBITING THE SALE OF LOW GRADE APPLES.

At various times it has been suggested that the export of low grade apples should be prohibited. Had there been such a law in force this year, many individual fruit growers would have suffered serious loss inasmuch as No. 3 apples this season frequently brought higher prices than No. 2 in ordinary years. This, of course, does not settle the question; nevertheless, it is well to note that in a year of scarcity a grade of fruit is acceptable that could not be disposed of at any cost in a year of plenty.

## FOREIGN CAPITAL IN CANADIAN ORCHARDING.

A significant feature of this year in the apple industry is the development of a large number of companies, some of them backed by foreign capital, having for their



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object, in some cases, the planting of new orchards but, for the most part, confining themselves to renting and renovating neglected bearing orchards, particularly in Ontario. It is reported that one company has already secured one hundred thousand trees, all on rental. These schemes cannot be considered as a permanent feature in Canadian orcharding, but they undoubtedly indicate that there is a great want of appreciation of the value of orchards when the operation of such companies can be made profitable. These companies will undoubtedly do good in awakening the great mass of eastern Canadian farmers to the possibilities of their orchards. Some of these companies will undoubtedly fail to make a profit, but many of them will succeed, and the farmer will reason, if he is wise, that if a company can take these orchards and work them as a commercial speculation with the extra expenses and the inevitable hazards of such a scheme, then it is demonstrated beyond a doubt that the owners using the same skill and methods but without the extraordinary expenses of these companies, can realize a much larger profit than the renters could hope to do. It is probable, therefore, that the first effect of these companies will be to greatly improve the methods of orcharding in Ontario, and then, in all probability, most of them will go out of existence at the end of their renting period. Some, however, who have invested in new orchards will in all probability become permanent features in the industry.

## JUDGING FRUIT AT FALL FAIRS.

Nearly ten years ago the Fruit Division inaugurated a campaign for the better judging of fruit and for the revision of the prize list of fall fairs. This reform was well received by the local authorities and now all the fruit growing provinces are revising their prize lists and asking for expert judges and for judging upon specific and uniform principles. Many old and useless varieties have been removed from the prize lists where they remained for years with no other object than to enable some local grower to take a prize. Commercial varieties have been clearly marked off from the amateur varieties; and a decision now is not merely the whim of a single individual but the result of an impartial analysis of the qualities of the fruit, each quality having a predetermined value. Much remains to be done, especially among the smaller fairs; but there has been a very great improvement during the last few years.

Members of the Fruit Division are frequently called upon to act as judges at fruit exhibitions. Mr. Carey in Ontario and Mr. Vroom in the maritime provinces have devoted considerable time to this work. I attended the Kings, Hants and Annapolis Fruit Show at Windsor and assisted in judging the apples there.

A significant feature of the year was the holding of a National Apple show at Vancouver. This was in every way a most successful exhibition and, though necessarily a large quantity of the fruit came from British Columbia, the national character of the show was maintained and a standard was set, which, if followed, will do much to improve the quality as well as the quantity of Canadian fruit.

## FRUIT CROP REPORT.

This feature of the work of the Fruit Division was carried on as usual during the season of 1910. The data is collected from three thousand correspondents distributed very carefully in every county in Canada. The reports of these correspondents are checked and tabulated as soon as they are received, and the results together with information gathered from every source available, is presented month by month. It is safe to say that with the large number of correspondents and the absolute check upon the individuality of particular correspondents, there could be no more authentic record of crops except an actual census. The information of the prospects has been verified as definitely as could be expected by the actual results.



## WEATHER FOR 1910.

No class of agriculturists depend more directly upon the results of the weather than the fruit grower. Consequently this feature is a most important one in any fruit report. The winter of 1909-10 was exceedingly favourable for the fruit crop. The ground was early covered with a blanket of snow which prevented the frost from entering deeply into the soil. Parts of Quebec suffered slightly for want of the usual covering of snow; while, on the contrary, western Ontario had more than the usual quantity.

The winter was particularly free from damages either by the weather or from mice and rabbits; so that the prospects just before the flowering period were exceedingly good. Unfortunately the spring opened somewhat early, three or four weeks earlier even than usual. Then followed the inevitable cold weather which extended into the blossoming period. The forepart of April in eastern Canada was cool and dry. This was succeeded in the early part of May by cold wet weather with frequent white frosts at night, all of which did great damage to the fruit buds. Notwithstanding this, the fruit appeared to set well, but later nearly all this fruit fell off, showing that the frost and other conditions had had an effect.

There were serious frosts the first week in June in nearly all parts of eastern Canada that affected the small fruit crop most seriously. All the strawberries that had been set, or bloom that was out in full, was destroyed. This frost is said to have affected the apple crop also and probably with some truth, although there has been no careful observation that would place this beyond dispute. There were so many other conditions that limited the crop that it would not be logical to attribute the failure of the apple crop in eastern Ontario wholly and solely to these frosts.

In Nova Scotia the weather for the most part was cool and showery and quite unsuitable for the pollination of fruit trees. The total precipitation was not very far from the average, but the temperature was one or two degrees below normal, with a very small amount of sunshine. The fruit growers attribute a great deal of damage to the frost, occurring the 6th of June.

In British Columbia, though the month was cool, it was not so much so as to be seriously detrimental to the fruit crop.

The weather for July and August was deficient in rainfall to such an extent as to seriously affect all kinds of fruit. The small fruits were decidedly short as the result of dry weather, and the serious drop in apples was attributed in part to the frost of June and also to the dry weather of the succeeding months.

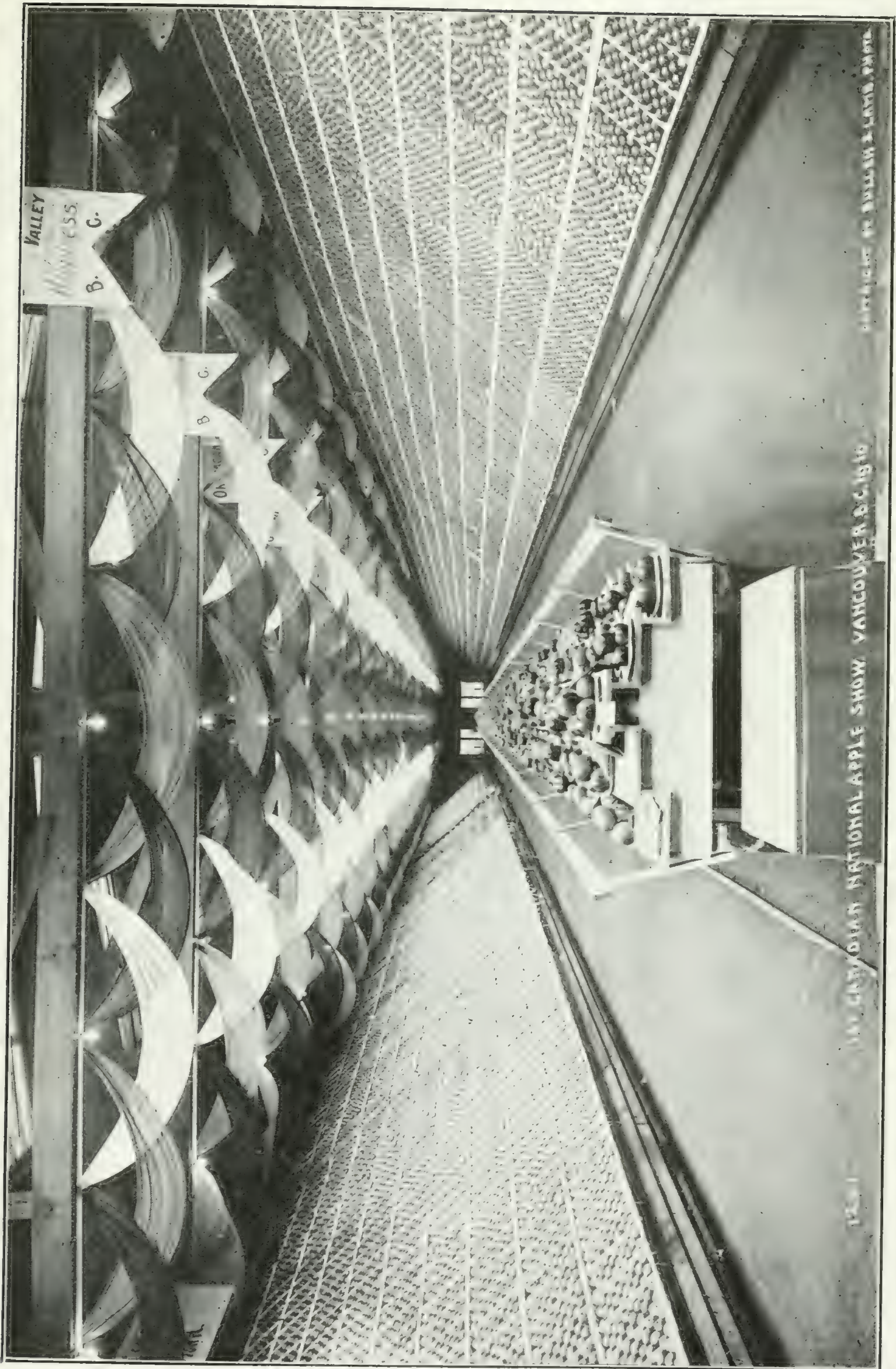
The rainfall the latter part of August was helpful to the apple crop in Ontario and Quebec, while in British Columbia, particularly the coast region, the weather was exceptionally hot and dry. Nova Scotia had very favourable weather for growth, but unfortunately the 'set' of apples was so poor that there was a certainty at that time of a small crop.

A very marked feature of the month of August was the large number of hail storms that prevailed. The effects of these were particularly serious in Ontario in the counties of Essex, Kent and Lambton. The grape crop of Niagara district was the one that suffered seriously in this portion of the province. An exceptional feature in the province of British Columbia was a general frost about the 23rd or 24th of August, which seriously damaged limited areas.

The weather for September was particularly favourable for the apple crop. The precipitation was evenly distributed and ample, with the exception of small portions of Nova Scotia and British Columbia where there was an excess.

The large amount of sunshine tended to colour apples better than usual, and many of the varieties matured 6 to 10 days earlier than usual. The few early frosts



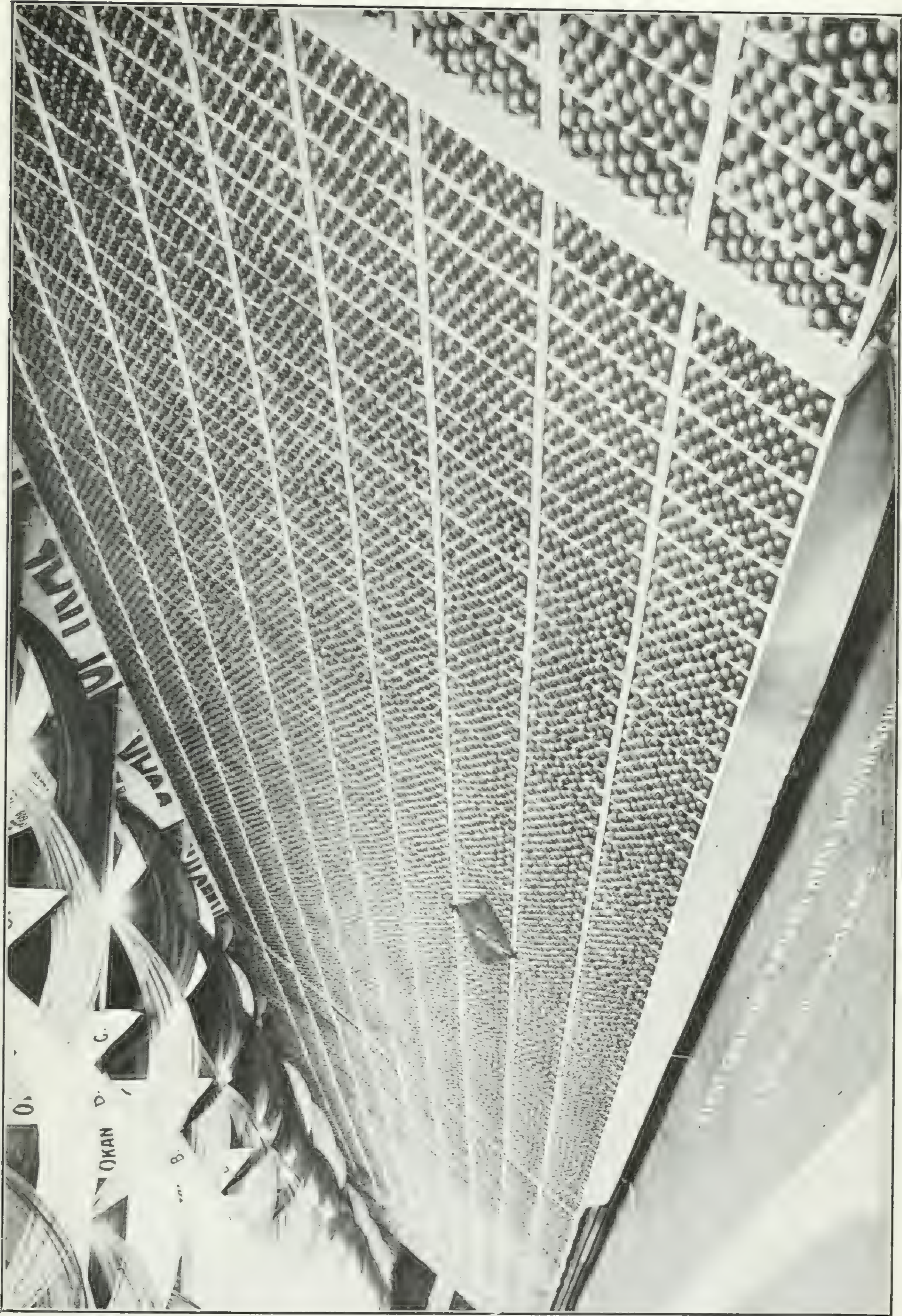


The Annex National Apple Show, Vancouver, 1910.









The Sweepstake Carload of Apples, National Apple Show, Vancouver, 1910.







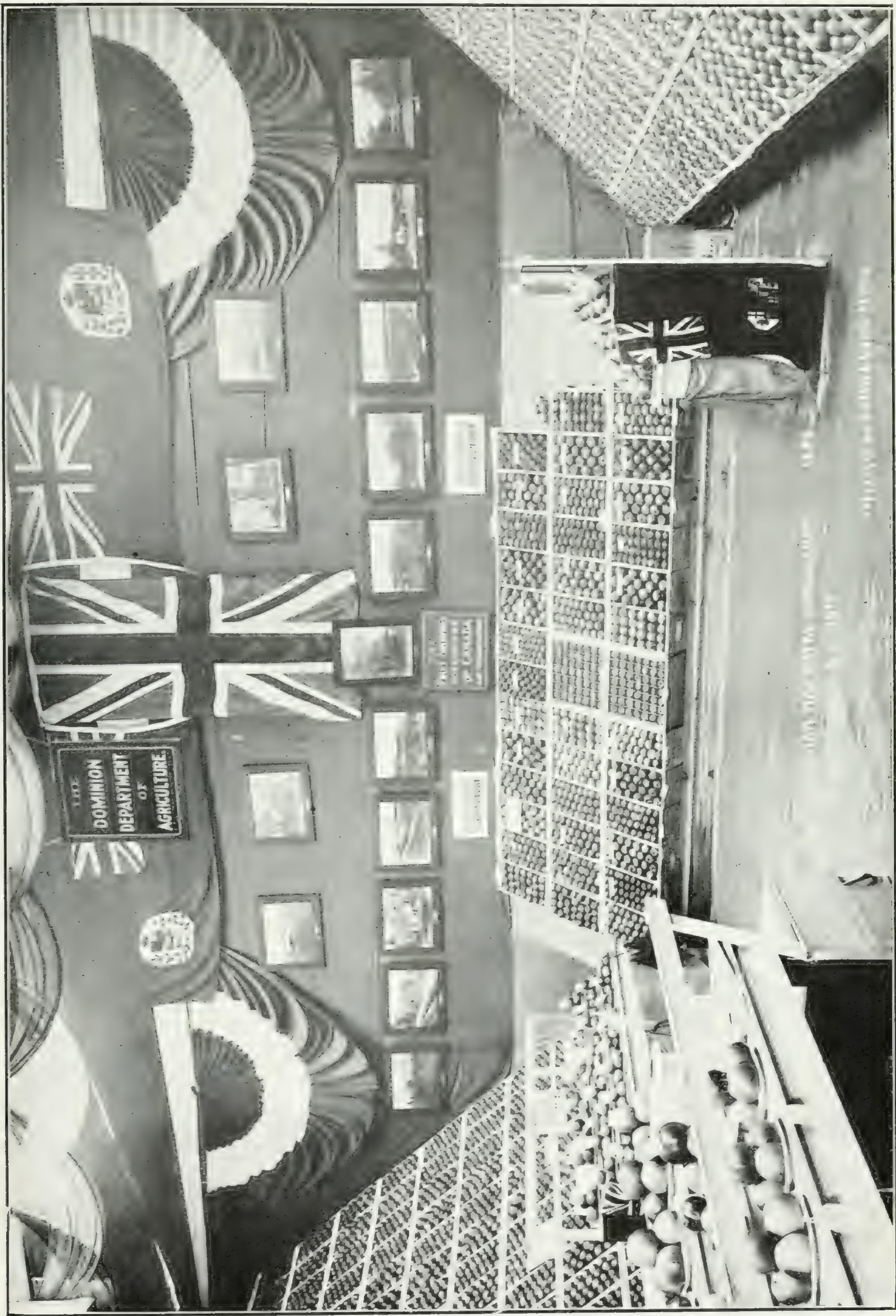


Exhibit of Dominion Department of Agriculture, National Apple Show, Vancouver, 1910.







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that occurred were not serious enough, in any district making a specialty of tender fruits, to injure the crop perceptibly. No high winds were reported, except in one or two cases of local storm.

This excellent weather was continued into October, making the fall of 1910 one of the best on record for the apple crop. Unfortunately, the crop was not a large one, but the weather conditions were such as to make a large portion of the crop of excellent quality. The apple crop was gathered without injury from frost and, except that it was somewhat over mature, in excellent condition.

Respectfully submitted,

A. McNEILL,  
*Chief Fruit Division.*







## PART IV.—COLD STORAGE







PART IV—COLD STORAGE.

CREAMERY COLD STORAGE BONUSES, 1910.

Out of 27 applications received, the following 21 creameries have received the full bonus of \$100 in 1910.

QUEBEC.

Name of Creamery.	County.	Owner.	Amount.
			\$
Contrecoeur .....	Vercheres .....	P. E. Cormier.....	100 00
Cowansville.....	Missisquoi.....	T. W. Dunn .....	100 00
Frontier.....	Huntingdon.....	W. H. Stewart .....	100 00
St. Cyprien.....	Temiscouata .....	Lazare Tremblay .....	100 00
St. Didace .....	Maskinonge .....	A. Lafond.....	100 00
St. Dominique .....	Soulanges .....	E. L'Ecuyer .....	100 00
St. Philemon .....	Bellechasse .....	Syndicat de Beurreries .....	100 00
St. Vallier .....	" .....	Jos. Roy .....	100 00

ONTARIO.

Hamilton .....	Wentworth.....	The Pure Milk Co.....	100 00
Kerwood.....	Middlesex .....	Wm. Waddell.....	100 00
Jarvis .....	Haldimand .....	Wm. Parkinson .....	100 00
Lynn Valley .....	Norfolk .....	R. W. Caswell.....	100 00
New Dundee.....	Waterloo .....	Farmers Co-operative Asso- ciation .....	100 00

ALBERTA.

Conjuring Creek .....		C. B. Shanty .....	100 00
Culham .....		Content Creamery Association .....	100 00
Ponoka .....		W. J. Hoar.....	100 00
Spring Lake .....		Spring Lake Dairy Co .....	100 00
Rosenroll.....		A. C. Hover.....	100 00

NEW BRUNSWICK.

Norton .....	Kings.....	W. A. Reynolds .....	100 00
Victoria Mills .....	Carleton .....	A. J. Main .....	100 00
Paid to Chas Gravel, L'Assomption, Que., on an old application .....			50 00
Total, 21 creameries.....			2,050 00

SUMMARY OF BONUSES PAID SINCE 1897.

419 creameries have received the full bonus of \$100 .....	\$	41,900
145 " " " \$75 00 .....		10,875
139 " " " \$50 00 .....		6,950
Total...703 " .....	\$	59,725



## ICED CAR SERVICES.

## ICED BUTTER CARS.

The iced butter cars were run regularly every week, according to a published schedule, from May 16 to October 15, on the Grand Trunk and Canadian Pacific railway lines in Ontario and Quebec; on the Péré Marquette; the Canadian Northern, Quebec; the Central Vermont in Quebec; the Intercolonial; the Quebec Central; the Quebec, Montreal and Southern and the Napierville Junction railway.

There were in all sixty-four different routes to Montreal and Quebec. The Department guaranteed two-thirds of the earnings of a minimum carload plus \$4 per car for icing. These cars are available for shipments of butter in any quantity at the regular rates, but the main advantage for the shippers lies in the facility for securing an iced car service for small quantities. Without this arrangement, shippers would have to use the ordinary cars or pay the charges for a carload on small quantities in refrigerator cars. The service for 1910 was operated at considerably less cost than in 1909. Three travelling inspectors are employed to go over the routes followed by all the iced cars. These inspectors report through the Extension of Markets Division.

## ICED CHEESE CARS.

This service has in previous years been in operation for ten weeks only, beginning about July 5th or 6th. It was decided to extend the period by one week and to have it begin on the 20th of June, which gave very much better satisfaction to shippers. In this service the Department agrees to accept bills, for the icing of a limited number of cars on each of the principal lines of railway, to the extent of \$5 per car. The cars are supplied by the railway agent on demand of shippers for shipments of cheese in carloads. The railways supplied 900 cars under this arrangement in 1910.

## ICED FRUIT CARS.

The iced fruit car service, which is operated on the same plan as the iced cheese car service, was available from August 1 to October 1, 1910. One hundred cars were supplied under this arrangement.

## RESERVATION OF COLD STORAGE CHAMBERS FOR FRUIT.

The quantity of tender fruit offered for export in cold storage by any one shipper is usually too small to warrant the steamship agents in agreeing to operate a whole chamber for it. It is not lack of cold storage, but lack of fruit which creates the difficulty. During the past three seasons the Minister has authorized the Dairy and Cold Storage Commissioner to reserve a small chamber on certain steamers for the carriage of fruit only, the Department of Agriculture to guarantee the earnings on the space represented by the chamber up to 3,000 cubic feet. This arrangement was extended to eleven steamers in 1910, sailing to London, Liverpool, Glasgow and Bristol, from September 8th to October 1st. As a result of this policy, there has been a large increase in the quantity of tender fruit exported, because without some such arrangement, it would be practically impossible to ship any kind of fruit requiring cold storage.



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SHIPMENTS of Canadian Apples and Tender Fruits from the Port of Montreal during the season of navigation, 1905 to 1910, inclusive.

Years.	Canadian Produce.	In Cold Storage.	In Cooled Air.	With Ordinary Cargo.	Total.
1905 .....	Apples.....Brls.	7,944	4,633		12,577
	".....Boxes.	4,332	2,903		7,235
	Tender fruits.....Pkgs.	5,211	46		5,257
1906 .....	Apples.....Brls.	8,536	3,878	366,363	378,777
	".....Boxes.	5,100	553	17,777	23,430
	Tender fruits.....Pkgs.	1,762	2,103	173	4,038
1907 .....	Apples.....Brls.	6,131	1,729	594,449	602,309
	".....Boxes.	500	3,232	25,240	28,972
	Tender fruits.....Pkgs.	754		87	841
1908 .....	Apples.....Brls.	6,109	1,338	318,068	325,515
	".....Boxes.	2,077	25	19,731	21,833
	Tender fruits.....Pkgs.	11,935	2,404	1,279	15,618
1909 .....	Apples.....Brls.	5,138	2,447	539,726	547,311
	".....Boxes.	3,304		31,451	34,755
	Tender fruits.....Pkgs.	10,846			10,846
1910 .....	Apples.....Brls.	13,973	12,398	133,225	159,596
	".....Boxes.	4,985	281	18,035	23,301
	* Tender fruits.....Pkgs.	14,557		91	14,648

\* This includes 3,743 cases of peaches shipped in cold storage.

SHIPMENTS of Apples from the Port of Quebec during the season of navigation, 1905 to 1910, inclusive.

Years.	Canadian Produce.	In Cold Storage.	In Cooled Air.	With Ordinary Cargo.	Total.
1905.....	Apples.....Brls.				
1906.....	"....."			13,882	13,882
1907.....	"....."			40,331	40,331
1908.....	".....Boxes.	2,871		24,798	27,669
	".....Brls.	2,912		200	3,112
1909.....	".....Boxes.		51	28,405	28,405
1910.....	".....Brls.		1,058	620	1,678
	".....Boxes.		2,648		2,648

SHIPMENTS of United States Apples and Tender Fruits from the Port of Montreal during the season of navigation, 1905 to 1910, inclusive.

Years.	United States Produce.	In Cold Storage.	In Cooled Air.	With Ordinary Cargo.	Total.
1905.....	Apples.....				
	Tender fruits.....Pkgs.	45,223	3,219		48,442
1906.....	"....."	29,581			29,581
1907.....	".....Boxes.	11,118			11,118
	Apples.....Brls.			24,701	24,701
	".....Boxes.		796		796
1908.....	Tender fruits....."	12,569	22,858		35,427
1909.....	"....."	27,274		1,492	28,766
1910.....	".....Cases.	48,917			48,917
	Apples.....Brls.	6			6
	".....Boxes.		9,023	5,750	14,773



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SHIPMENTS of Perishable Products from the Port of Montreal, season 1910. (United States Products included.)

		In Cold Storage.	In Cooled Air.	With Ordinary Cargo.
Apples--Canadian	Brls.	13,973	12,398	133,225
"	Boxes.	4,985	281	18,035
" U. S. A.	Brls.	6		
"	Boxes.		9,023	5,750
Butter--Canadian	Pkgs	30,058		
Cheese	Boxes.		480,413	1,409,944
Meats	"	10,561	6,674	13,086
"	Bags.	284		
" U. S. A.	Boxes.	24,946	610	45,729
Beef--Canadian	Quarters.	751		
Salmon	Boxes.	934		
Poultry	Cases.	366		
Lard	Pkgs.	63		
" U. S. A.	Pkgs.	26,391	12,238	379,650
Pears--Canadian	Brls.	296		
"	Cases.	10,518		91
" U.S.A.	Brls.	401		
"	Cases.	26,483		
Peaches--Canadian	"	3,743		
Fruit--Canadian	Mixed lots.	387		
" U. S. A.	"	26,033		

SHIPMENTS of Perishable Products from the Port of Quebec, season 1910. (United States Products included.)

		In Cold Storage.	In Cooled Air.	With Ordinary Cargo.
Apples--Canadian	Brls.		1,058	620
"	Boxes.		2,648	
Cheese	"		2,552	15,353
Meats	"		2,371	1,891
" U. S. A.	"		7,097	5,475
Lard	Pkgs.			31,935
Salmon--Canadian	Boxes.	783		
Poultry	Cases.	825		
Eggs	"			72



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## THERMOGRAPHS.

The Department now owns a sufficient number of recording thermometers (thermographs) to enable the officers of the Extension of Markets Division to place one or more with practically every cargo of perishable produce shipped from Montreal, Quebec, Halifax or Vancouver in cold storage, cooled air, or as ordinary cargo.

## THERMOGRAPHS PLACED IN STEAMSHIPS, SEASON 1910.

From Montreal and Quebec.	WHERE PLACED IN STEAMSHIPS.		
	In Cold Storage.	In Cooled Air.	With Ordinary Cargo.
	Times.	Times.	Times.
To Bristol—			
Cheese, meats and lard .....	13	20	41
Butter and lard.....	21	..	..
Fruits.....	6	..	1
To Glasgow—			
Cheese, meats and lard .....	27	..	31
Butter and lard.....	6	..	..
Fruits.....	35	..	25
To Liverpool—			
Cheese, meats and lard.....	51	5	113
Butter.....	8	..	..
Fruits.....	12	1	19
Frozen salmon.....	5	..	..
To London—			
Cheese, meats and lard.....	19	36	70
Butter.....	7	..	..
Fruits.....	10	3	16
Frozen salmon.....	2	..	..
To Manchester—			
Cheese, meats and lard .....	..	..	30
Butter and lard.....	1	..	..
Fruit.....	..	..	5
Poultry.....	1	..	..
To South Africa—			
Apples.....	2	..	..
Cheese and lard.....	1	..	..
From Vancouver to Australia—			
Apples.....	2	..	..
From Charlottetown, P.E.I., to Montreal—			
Cheese.....	..	..	2

There were also 28 records obtained with cheese and apples from Halifax to London, and 10 records with apples from Halifax to Liverpool.



SUMMARY.

Total number of thermographs placed in steamships in cold storage, in cooled air and with ordinary cargo, season 1910.

To	In Cold Storage.	In Cooled Air.	With Ordinary Cargo.
	Times.	Times.	Times.
Bristol.....	40	20	42
Glasgow.....	68	..	56
Liverpool.....	76	6	132
London.....	38	39	86
Manchester.....	2	.	35
South Africa..	3	..	..
Australia.....	2	..	..
	229	65	351

Montreal and Quebec--Great Britain.....	640
Halifax--London..	28
Halifax--Liverpool .....	10
Montreal--South Africa.....	3
Vancouver--Australia .....	2
Charlottetown--Montreal .....	2
Grand total for 1910 .....	685



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## NUMBER of Sailings of Steamers from Montreal and Quebec, with details of Cold Storage Accommodation, Season 1910.

Name of Steamer.	Number of Sailings.	Number of Chambers.	Total Capacity in Cubic feet.
<i>Allan Line.</i>			
To Liverpool—			
Tunisian.....	7	4	21,650
Corsican.....	8	5	21,270
Victorian.....	7	5	17,260
Virginian.....	7	4	12,440
To London—			
Hibernian.....	3	3	7,956
Lake Erie.....	5	4	21,700
Corinthian.....	5	4	16,722
Sardinian.....	5	2	9,628
Sicilian.....	5	3	14,700
Pomeranian.....	4	2	8,056
To Glasgow—			
Hesperian.....	7	5	23,400
Ionian.....	8	6	13,553
Pretorian.....	7	6	25,270
Grampian.....	4	5	23,400
Southwark.....	2	1	25,313
<i>Canadian Pacific Line.</i>			
To Liverpool—			
Empress of Britain.....	8	3	29,700
Empress of Ireland.....	7	3	29,700
Montrose.....	1	2	20,950
To London—			
Montfort.....	5	3	24,700
Montrose.....	4	2	20,950
To Bristol—			
Monmouth.....	5	2	15,400
Montcalm.....	6	1	16,730
<i>White Star—Dominion Line.</i>			
To Liverpool—			
Dominion.....	8	4	40,985
Megantic.....	7	4	27,240
Canada.....	7	4	47,915
Laurentic.....	7	4	27,240
To Bristol—			
Cornishman.....	6	2	28,560
Englishman.....	1	4	37,600
Manxman.....	5	3	54,160
Welshman.....	4	4	46,920
Turcoman.....	3	4	38,440
<i>Donaldson Line.</i>			
To Glasgow—			
Cassandra.....	6	3	6,100
Saturnia.....	5	3	7,550
Parthenia.....	2	4	13,862
Athenia.....	6	4	16,122
Lakonia.....	6	4	12,400
<i>Thomson Line.</i>			
To London—			
Cervona.....	5	4	15,320
Cairnrona.....	5	6	18,624
Bevona.....	5	3	21,953
Hurona.....	5	4	20,487
Iona.....	6	4	18,472
Tortona.....	4	2	9,000



NUMBER of Sailings of Steamers, &c.—Continued.

Name of Steamer.	Number of Sailings.	Number of Chambers.	Total Capacity in Cubic feet.
<i>Royal Line.</i>			
To Bristol—			
Royal George.....	7	2	10,900
Royal Edward.....	7	2	10,900
<i>Manchester Liners.</i>			
To Manchester—			
Manchester Trader....	5	1	3,000
<i>Elder Dempster Line.</i>			
To South Africa—			
Canada Cape.....	2	5	66,000
Melville.....	1	6	59,647
Bendu.....	2	2	9,000
Benin.....	1	2	9,000
Kwarra.....	1	2	10,000

COOLED AIR SERVICE, 1910.

Name of Steamer.	Number of Sailings.	Cubic Feet Space.
<i>Allan Line—</i>		
Southwark.....	2	41,472
Hibernian.....	3	45,540
Corinthian.....	5	25,000
Sardinian.....	5	17,600
Sicilian.....	5	27,480
Pomeranian.....	4	26,000
<i>Canadian Pacific Line—</i>		
Montcalm.....	6	18,668
Monmouth.....	5	19,443
<i>Dominion Line —</i>		
Englishman.....	1	18,617
Mauxman.....	5	41,585
Turcoman.....	3	40,491
Canada.....	7	46,904
<i>Thomson Line—</i>		
Cairnrona.....	5	76,739
Cervona.....	5	97,530
Devona.....	5	97,574
Hurona.....	5	79,707
Tortona.....	4	88,547
Iona.....	6	89,178



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## COLD STORAGE SUBSIDIES.

Contracts for the payment of subsidies under the Cold Storage Act have been entered into during the year as follows:—

The St. Lawrence Produce Co., Brockville, Ont.  
 Scott, Ashton & Co., Morrisburg, Ont.  
 Flavelles, Limited, Lindsay, Ont.  
 The Acadia Cold Storage Co., Halifax, N.S.  
 Gunns, Limited, Harriston, Ont.

Applications are now under consideration from:—

The Maritime Fresh Milk Co., Antigonish, N.S.  
 The Northern Packing Co., Prince Albert, Sask.  
 Campbell & Hamilton, Calgary, Alta.  
 The Brandon Cold Storage Co., Brandon, Man.

## COST OF COLD STORAGE WAREHOUSES.

Many inquiries are received at this office from those who desire to know the probable cost of a cold storage warehouse of a given capacity. There are so many factors that have an influence in fixing the cost of a cold storage warehouse, such as the class of building, the character of the insulation, the proportion of high and low temperature space, the size of the warehouse, &c., that it is impossible to give any but an approximate answer to such questions.

The cost, with some particulars of the construction, and the size in cubic feet, of some of the warehouses which have been subsidized under the Cold Storage Act, is given below to afford some information on this subject. All names and location of the warehouses are indicated by numbers only. The class of construction for the buildings, apart from the insulation, is represented by letters thus:—

A—Wooden building.

B—Brick or concrete walls, 'mill construction floors.'

C—Reinforced concrete.

D—Brick, stone or concrete, ordinary floors.

Class of Building.	Size of Building.	Insulation.	Refrigerated space.	Cost exclusive of site.
	Cubic feet.		Cubic feet.	\$
1 B	974,622	Cork.....	700,224	167,000·00
2 D	372,000	Hair felt and shavings .....	105,000	31,019·62
3 A	142,218	Shavings.....	37,960	27,386·69
4 C	744,488	Cork .....	346,538	160,500·00
5 D	71,520	Cork.....	37,161	23,577·00
6 B	202,262	Lith.....	64,000	65,000·00
7 A	160,000	Shavings.....	50,000	18,682·00
8 D	220,000	Shavings.....	33,600	20,000·00
9 A	108,040	Cork and shavings.....	59,940	57,500·00
10 B	356,400	Cork.....	225,000	158,043·00
11 B	270,000	Cork.....	111,050	60,000·00
12 D	200,000	Hair felt and shavings.....	131,510	49,000·00



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It will be observed that there is considerable difference in the cost of the warehouses in this list on a cubic foot basis. The difference is owing to the fact that some of them are wholly equipped for very low temperature for fish freezing, while others have a large proportion of space intended for fruit or egg storage at non-freezing temperatures. The difference between the total space and the refrigerated space is represented by engine rooms, receiving and delivery rooms, corridors, packing floors, &c.

J. A. RUDDICK,  
*Dairy and Cold Storage Commissioner.*

























